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THE JOURNAL

OF

MENTAL SCIENCE

*(Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland).*

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“Nos vero intellectum longius a rebus non abstrahimus quam ut rerum imagines et
radii (ut in sensu fit) coire possint.”

FRANCIS BACON, *Proleg. Instaurat. Mag.*

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"IN adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the terms, mental physiology, or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid, for although we do not eschew metaphysical discussion, the aim of this Journal is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is, in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our Journal is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanic uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow men, may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science, with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—J. C. Bucknill, M.D., F.R.S.

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PART 1.—ORIGINAL ARTICLES.

The Study of the Criminal. By HAVELOCK ELLIS.

When Homer described Thersites as ugly and deformed, with harsh or scanty hair, and a pointed head, like a pot that had collapsed to a peak in the baking—

ἄισχιστος δὲ ἀνὴρ ὑπὸ Ἰλίου ἦλθεν.
φολκὸς ἔην, χωλὸς δ' ἕτερον πόδα. τὼ δέ οἱ ὤμῳ
κυρτῷ, ἐπὶ στήθος συνοχωκότε. αὐτὰρ ὑπερθεν
φοζὸς ἔην κεραλήν, ψεδνὴ δ' ἐπενήνοθε λάχνη

—he furnished evidence as to the existence of a criminal type of man. These physical characters of Thersites are among those which in these last days have been submitted to scientific observation, and to statistics, and have been largely justified. The epigrammatic utterances in which primitive peoples crystallize and pass on their philosophy and science, include many sayings which prove the remote period at which men began to perceive the organic peculiarities which separate the criminal man from the average man. There are some proverbs of this character, such as those indicating the widespread dislike of the red-haired, for which no solid justification has yet been found; but among various races, and in many countries, numerous proverbs are in harmony with the results of modern research: *A vultu vitium*, the old Roman saying; *Au vis [visage] le vice*, the old French saying; the Tuscan, *Il ciuffo è nel ceffo*, "Salute from afar the beardless man and the bearded woman;" "Distrust the woman with a man's voice;" "A pale face is worse than the itch." Such are a few that might be easily increased.

At a very early period such popular generalizations as these were embodied in that empirical science of physiog-

nomys, which found many professors among the Greeks and Romans. According to the well-known story, a Greek physiognomist who examined Socrates' face judged that the philosopher was brutal, sensuous, and inclined to drunkenness, and Socrates declared to his disciples that such, although he had overcome it, was his natural disposition. He was himself a physiognomist; he disliked a certain man who was of pale and dark complexion, such signs, he said, indicating envy and murder; the peculiar dark and pallid complexion of the instinctive criminal has of late years been frequently noted.

Aristotle, that great master of all the sciences, clearly recognized not merely the physiognomic signs of habits, vices, and crimes, including many signs that are in accordance with modern scientific observation, but he also observed a connection between the shape of the head and the mental disposition, and he recognized the hereditary character of vicious and criminal instincts. Galen adopted the views of Aristotle, and also pointed out the influence of the abuse of alcohol in the production of crime; he was of opinion, also, anticipating a modern doctrine, that as the criminal is a criminal by nature, he ought to be destroyed, not in revenge, but for the same reason that scorpions and vipers are destroyed.

Although these feeble beginnings of criminal anthropology received the sanction of the highest scientific authorities, as well as of the people, and later on a mediæval law declared that if two persons fell under suspicion of crime the uglier or more deformed was to be regarded as more probably guilty, they were not universally admitted, and some, like Pliny, regarded it as absurd that the outward form could indicate the inward disposition. Whatever art or science there was in the matter was left, then and long after, to the physiognomists, of whom Polemon may be taken as a distinguished example, and these were ready to supply the most elaborate physical signs to correspond to any vicious or criminal disposition. This pseudo-science was passed on from physiognomist to physiognomist, usually with added absurdities, until in the sixteenth century we reach the Neapolitan Dalla Porta, at once the greatest (and except Lavater the last) of the physiognomists of the old school and the first of the new. He treated judicial astrology with contempt, and at the same time wrote a treatise of celestial physiognomy; he gathered up all that his predecessors had done, and at the

same time laid the foundations of a more scientific treatment.

Passing by Lavater, with his fine intuitions and genial humanity, which formed, however, no epoch in the scientific study of criminal anthropology, at the beginning of the present century, we reach Gall.

Before speaking of Gall, however, it is necessary to give a word, in passing, to Grohmann, who slightly preceded him, and who anticipated many of the conclusions relative to facial and cranial characteristics reached by modern criminal anthropologists. Thus, in 1820, he wrote :—"I have often been impressed in criminals, and especially in those of defective development, by the prominent ears, the shape of the cranium, the projecting cheek-bones, the large lower jaws, the deeply-placed eyes, the shifty, animal-like gaze."

Gall was a man of unquestionable scientific genius, who thrust aside for ever the credulous fancies of the physiognomists; he has been described, not altogether without reason, as the founder of the modern science of criminal anthropology. He was certainly its most brilliant pioneer. Lavater believed in the homogeneity of the human organism, but he was not a man of science, and he had been content to study the surface of the body; Gall, with true scientific instinct, tried to get to the root of the matter; he studied the brain, sought to differentiate the functions of its various parts, and the effects of its varying development on the skull.

For Gall, the varying development of the brain was the cause of the divergent mental and moral qualities of the individual; he was firmly convinced that all the facts of psychical life are rooted in the physical organization; he wished to write the natural history of every primitive moral and intellectual force, in health as well as in disease. To the best of his ability he carried out this programme in detail, by an unceasing study of all the varieties of the brain and of the living head that he could find; he pursued his studies throughout Europe, in lunatic asylums and in prisons, as well as among the ordinary population, and he foresaw the extent of the applications of the science he was opening up to medicine and to law, to morality and to education. While his work extended far beyond the borders of what we should now call criminal anthropology, he devoted much attention to the problems of the criminal organization, and even to its varieties, many of his observations according well with the results of recent investigation. More than this,

following Galen and Diderot (who had written, fifty years earlier, "The evil-doer is one whom we must destroy, not punish"), he clearly advocated a method of dealing with the criminal which is now widely regarded as the only right and reasonable method. "There can be no question," he said, "of culpability or of justice in the severe sense; the question is of the necessity of society preventing crime. The measure of culpability, and the measure of punishment cannot be determined by a study of the illegal act, but only by a study of the individual committing it." In his great work, "*Les Fonctions du Cerveau*" (1822), Gall has summed up his conclusions.

It has been the misfortune of this great and truly scientific investigator, to give origin to an empiric art of phrenology which took the place of the old art of physiognomy he had done so much to destroy. He has consequently, until recent years, been popularly known chiefly by his mistakes, especially, perhaps, by his localization of the sexual instinct in the cerebellum, a localization, however, which he supported by a large body of evidence. The influence of dubious phrenological doctrines hardened into a system somewhat impairs the value of Lauvergne's "*Les Forçats*" (1841), which seems to have been the first book of any importance devoted entirely to the study of convict nature, physical, moral, and intellectual. Lauvergne, who was the chief medical officer to the hospital for convicts at Toulon, appears to have been a man of humanitarian instincts, whose wit and *bonhomie* enabled him to maintain friendly relations with the criminals he was studying; he had little capacity for scientific analysis, but he wrote fully of what he had seen and known, and his book contains many keen observations which have been since verified. He fully recognizes, also, the importance of the social factor in the production of criminals.

Lauvergne had observed how many of his subjects were insane or diseased; the students of the criminal, who followed him, all insisted on the pathological element. Dally maintained that the criminal and the lunatic are identical, and both equally irresponsible. Prosper Lucas, in his valuable "*Traité philosophique de l'hérédité*" (1847), showed how deeply rooted in the organism are the morbid tendencies of crime. It was, however, Morel who, in his "*Des Dégénérescences*" (1857), chiefly developed this aspect of criminality, and his influence is still strong among

French students of the criminal. For Morel crime was one of the forms taken on by degeneration in the individual or the family; and degeneration he defined as "a morbid deviation from the normal type of humanity." The causes of degeneration which he recognized were intoxications, famines, social environment, industries, unhealthy occupations, poverty, heredity, pathological transformations, moral causes. "My principal aim," he says, "has been the study of these causes, and of the influences which they exercise, firstly on the constitution of individuals, and afterwards on that of their descendants." Among these causes he gives a chief place to the manifold effects on the children of alcoholism in the parents. In his pamphlet "*De la Formation du Type dans les variétés dégénérées*" (1864), Morel proposed to give the name of morbid anthropology to "that part of the natural science of man whose aim is to study the characters which are due to certain special diseased influences, as well as to hereditary transmissions of bad nature."

Despine, by his great work, "*Psychologie Naturelle*" (1868), made a new and important step in criminology. Leaving aside the study of the criminal's physical nature, he sought to make an exhaustive study of his mental nature. No one has done more than Despine to prove that what we should now call the instinctive criminal is, on the psychological side, a natural anomaly, a mental monstrosity. He brought into clear relief the unforeseeing imprudence, the entire lack of moral sensibility, and of remorse, which characterize the instinctive criminal. He recognized that the criminal is not necessarily an insane or diseased person, and he showed that his abnormality is not of the kind that intellectual education can remedy. "No physiologist," he said, "has yet occupied himself with the insanity of the sane;" he considered the criminal as "morally mad," and therefore irresponsible. Maudsley, from an opposite philosophic stand-point, came to very similar conclusions. Without bringing any fresh contribution of importance, he reaffirmed emphatically the conclusions already reached. Speaking in his "*Responsibility in Mental Disease*" (1872), of instinctive criminals, he remarks, "It is a matter of observation that this criminal class constitutes a degenerate or morbid variety of mankind, marked by peculiarly low physical and mental characteristics. Like Despine, he drew from this the conclusion, since widely accepted, that

the criminal, being morally insane and usually incurable, should be treated in the same way as the intellectually insane person. "If the matter be considered deeply, it may appear that it would, perhaps, in the end make little difference whether the offender were sentenced in anger and sent to the seclusion of prison, or were sentenced more in sorrow than in anger, and consigned to the same sort of seclusion under the name of an asylum. The change would probably not lead to an increase or to a decrease in the number of crimes committed in a year." An artist as much as a man of science, master of a sombre and weighty style, illumined by vivid flashes of imagination, Maudsley by his numerous works popularized the new ideas, and is justly regarded abroad as a distinguished pioneer of criminal anthropology.*

Broca, who, by initiating the Société d'Anthropologie of Paris in 1859, may be regarded as the founder of the modern science of anthropology, gave attention also to the special science of criminal anthropology by noting the peculiarities of the skulls of criminals. At the Exeter meeting of the British Association in 1869, Dr. G. Wilson read a paper on "The Moral Imbecility of Habitual Criminals as exemplified by cranial measurements." He had measured 464 heads of criminals and found that habitual thieves presented well-marked signs of insufficient cranial development, specially anteriorly. "The cranial deficiency," he observed, "is associated with real physical deterioration. Forty per cent. of all the convicts are invalids, more or less; and that percentage is largely increased in the professional thief class." He argued that a prisoner must be treated on reforming principles, and not allowed unrestricted liberty until there was reasonable evidence to show that he would not prove dangerous to society. About the same time, also, (in 1870), J. Bruce Thomson, Resident Surgeon to the General Prison for Scotland at Perth, published in this Journal a summary of his observations on over 5,000 prisoners. From the decisiveness of his utterances and the large number of prisoners of whom he was able to speak, this summary gave a stimulus to the study of the criminal throughout Europe. Thomson enumerated some of the physical characteristics of the instinctive criminal now generally recognized, pointed

* In recent utterances Dr. Maudsley seems to ignore, or to treat with indifference, the results of criminal anthropology. These results are, however, but the legitimate outcome of the ideas of which it is his chief distinction to have been the champion.

out the semi-imbecility prevalent among the juvenile criminals under his observation, the frequency of accumulated morbid appearances at post-mortem examinations, and the large proportion of cases at Perth needing treatment for mental diseases soon after admission, "apparently from congenital causes." Thomson's facts and opinions were too curtly and, probably, too emphatically stated. Dr. Nicolson, writing also in this Journal from 1873 to 1875, dealt with the morbid psychology of the criminal, the unstable, emotional element in him, his proneness to delusions, his insensibility, and his weak-mindedness. Dr. Nicolson's papers, all written before the latest and most fruitful era of criminal anthropology began, were, so far as I have been able to trace, the latest original contributions from the scientific side made in England to the study of the criminal. Such knowledge as has been furnished since has come from writers who have, almost of necessity, dealt with what may be called the mental and social symptomatology of criminals. Among the books which supply more or less valuable or interesting information of this kind may be mentioned the Rev. J. C. Horsley's "Prison Jottings," Michael Davitt's "Leaves from a Prison Diary," and the "Scenes from a Silent World," by a Prison Visitor, which appeared in "Blackwood's Magazine" during 1889.

Italy is to-day the home of criminal anthropology, and not of criminal anthropology only, but of all the sciences that are connected with crime and the criminal; the Zanardelli criminal code, which has recently become law, while by no means entirely satisfactory from the scientific point of view, shows the influence of the new movement. In this respect Italy remains true to traditions that are two thousand years old; in the sixteenth century Italy was still the centre of studies in penal law, and, to keep to modern times, it is enough to mention the great names of Beccaria and, still more recently, Romagnosi. It was under the auspices of Beltrani-Scalia, well known in connection with prison reform, that the earlier Italian studies in criminal anthropology were published, from 1870 onwards, in the "*Revista delle discipline carcerarie*," a journal which continues to publish valuable monographs. In this journal Lombroso published, in 1872, the results of some investigations he had made on prisoners at Padua.

Prof. Cesare Lombroso, of Turin, occupies a position of such importance in the development of criminal anthro-

pology that it is necessary to have a clear idea of his aims and methods and the nature of his achievement. Born in 1836, of Venetian parentage, the various and restless activities of Lombroso's career are characteristic of the man who has been all his life opening up new paths of investigation and enlarging the horizon of human knowledge. At the age of eleven he composed romances, poems, and tragedies in the manner of Alfieri; at twelve he developed a passion for classical antiquity, and published two small works on Roman archæology. At thirteen he was attracted to the study of sociology from a linguistic point of view (chiefly, we are told, with relation to Greek, Hebrew, Chinese, and Coptic); at the same time he was drawn to natural science, being interested especially in the formation of crystals, and before entering the University he had published two books of a somewhat evolutionary character. While a student he was led, by the combined study of ancient religions and of medicine, to the subject of mental diseases. He began with studies on cretinism in Lombardy and Liguria, his conclusions being afterwards adopted by Virchow and others. In the eventful year of 1859 he became first a soldier, and afterwards a military surgeon. In 1862 he was in charge of the department of mental diseases at Pavia University, and he initiated there an institution for the insane, a psychiatric museum, and a series of researches in the application of exact methods to the study of madness. This last attempt was at the time received with general derision; it was said that he was studying madness with a yard measure; but his methods gradually made progress, and slowly met with general adoption. After this he made some important investigations into the causes of pellagra. Called to direct the asylum at Pesaro, he reformed it, and established a journal, written and managed by the insane. He then returned to Pavia, where he continued his psychiatric work, investigated the influence of atmospheric conditions on the mind, invented an instrument to measure pain, and engaged in a great number of studies, marked by extraordinary ingenuity, patience, and insight. Even as a youth Lombroso possessed the art of divining fruitful ideas, which at the time appeared absurd to scientific men as well as to the public. Every line of investigation he took up was at the time apparently opposed to the general tendency of thought, and only received general acceptance at a later date. This was true, even of the great achievement of his life.

In the year 1859—perhaps the most memorable of the century—Broca, who had a decided influence on Lombroso, had inaugurated the naturalist method of treating man with the Société d'Anthropologie of Paris. The illuminating genius of Virchow, and his prodigious energy, which has done so much for anthropology and the methods of anthropology, also had its influence on the Italian, in some respects a kindred spirit. And Darwin's "Origin of Species," published in 1859, supplied, for the first time, an indispensable biological basis, and furnished that atavistic key of which Lombroso was tempted to make at first so much use, sometimes, it must be added, so much abuse. These circumstances combined to render possible, for the first time, the complete scientific treatment of the criminal man as a human variety, while Lombroso's own manifold studies and various faculties had given him the best preparation for approaching this great task. It was in 1859 that he first conceived this task; "L'uomo delinquente" was not, however, finally published until 1876, while the second volume only appeared in 1889.

The influence of "L'uomo delinquente" in Italy, France, and Germany seems to have been as immediate and as decisive as that of "The Origin of Species." Despine's "Psychologie Naturelle," the greatest work on the criminal that had appeared before Lombroso, was partial; the criminal was therein regarded purely as a psychological anomaly. Lombroso first perceived the criminal as, anatomically and physiologically, an organic anomaly. He set about weighing him and measuring him, according to the methods of anthropology. Even on the psychological side he gained new and more exact results. He went back to the origins of crime among plants and animals, among savages and children. He endeavoured to ascertain the place of the criminal in nature, his causes, and his treatment. Lombroso's work is by no means free from faults. His style is abrupt; he is too impetuous, arriving too rapidly at conclusions, lacking in critical faculty and in balance. Thus he was led at the beginning to over-estimate the atavistic element in the criminal, and at a later date he has pressed too strongly the epileptic affinities of crime. His weaknesses have never been spared rough handling from friendly or unfriendly hands. Thus Mantegazza, while recognizing his *ingegno potentemente apostolico e geniale*, denies that Lombroso possesses any of the qualities of a scientific investigator, and Dr. Napoleone Colajanni, who, from the Socialistic

left of the movement, has, in his "*Sociologia Criminale*" (1889) and elsewhere, bestowed much elaborate and often valuable criticism on the centre, compares Lombroso's indiscriminate collection of facts to Charles IX.'s famous order on St. Bartholomew's eve: "Kill them all; God will know His own." But his work has been so rich, so laborious, so various; it has opened up so many new lines of investigation, and has suggested so many more, that it has everywhere been received as marking a new epoch. He was, as he has himself expressed it, the pollen-conveying insect, and the new science which he fecundated has grown with extraordinary rapidity. A continuous stream of studies—from books of the most comprehensive character down to investigations into minute points of criminal anatomy or physiology—is constantly pouring forth. It is still impossible to gather up this mass of investigation, often necessarily discordant, into more than a tentative whole, but its existence is sufficient to prove the vitality of the new science. It has, of course, met with fierce antagonism, but the more intelligent of its opponents have confined their criticism to the interpretation of the facts. Lombroso himself has declared that perhaps not one stone will remain upon another, but that if this is to be the fate of his work, a better edifice will arise in its place.

Two other Italians must be mentioned with Lombroso. Enrico Ferri, Professor of Penal Law and a Deputy in the Italian Parliament, while doing valuable work as a criminal anthropologist, has at the same time studied the social bearings of criminality in his best-known book "*Nuovi Orizzonti del Diritto*." He has occupied himself less with the instinctive than with the occasional criminal, and his clear and philosophic spirit has placed him at the head of criminal sociologists. Garofalo, a Neapolitan lawyer, accepting generally the conclusions reached by Lombroso and Ferri, has become the jurist of the movement, and his "*Criminologie*" (the new and enlarged edition is written in French) is marked by its luminous yet careful generalization and its suggestions of wise reform. Garofalo has brought into clear relief the inadequacy of legal maxims founded on antiquated and unscientific conceptions, and he has shown that not the nature of the crime, but the dangerousness (*temibilità*) of the criminal constitutes the only reasonable legal criterion to guide the inevitable social reaction against the criminal.

Among Italian workers in the department of criminal anthropology proper, a very high place belongs to Dr. Antonio Marro, formerly surgeon to the prison at Turin. "I Caratteri dei Delinquenti" (1887) contains the results of a carefully-detailed and methodic examination of more than five hundred prisoners, men and women, and of over one hundred normal persons, together with an investigation into their ancestry and habits. All the data are presented in tabular form, and his excellent methods and judicious moderation in drawing conclusions impart great value to his work. His exactness and impartiality have been admired even by those whose instincts and training have led them to dread the invasions of this department of science. Dr. Marro has made interesting contributions to the differentiation of various criminal types, and he has brought out very clearly the disastrous tendency to degeneration among the children of parents who have passed middle age. Other Italian studies, among many that might be mentioned, are Virgilio's, dating from 1874, Dr. P. Penta's elaborate studies, the various works of Zuccarelli, the energetic Neapolitan professor and editor of "L'Anomalo," V. Rossi's work, "Studio sopra una Centuria di criminali," Salsotto's on women delinquents, and Ottolenghi's investigations into the senses of criminals. The "Archivio di Psichiatria," a rich store-house of elaborate observations, founded in 1880, directed by Lombroso, Ferri, Garofalo, and Morselli, edited by Rossi and Ottolenghi, remains at the head of journals of criminal anthropology.

The first suggestion of an international congress of criminal anthropology arose in Italy, and dates from the year 1882, when Salvatore Tommasi published an important article in the "Rassigna Critica." The first congress, that of Rome, was not, however, actually held until 1885. It was attended by all the most distinguished criminal anthropologists, criminal sociologists and jurists of the "positive" school, chiefly Italian, French, and German, and its "Actes" are of great interest. The second international congress was held last August in Paris. Here, naturally, the French element predominated.

France has always been a laboratory for the popularization of great ideas, and Tarde's "La Criminalité Comparée" is among the best of such attempts. M. Tarde is a *juge d'instruction*, not an anthropologist; he touches on all the various problems of crime with ever-ready intelligence and

acuteness, and a rare charm of literary style, illuminating with suggestive criticism everything that he touches. This easily accessible little volume of the Librairie de Philosophie Contemporaine is the most comprehensive introduction for those who would go down to the *città dolente* by a rose-strewn path. Lacassagne, the eminent medico-legal expert of Lyons, stands, perhaps, at the head of French criminal anthropologists, although beyond his monograph, "Les Tatouages," he has published little. The judicial qualities of his mind, and his power of expressing just and large conceptions in felicitous and memorable phrases, impart value to all that he writes, and his forthcoming work on the criminal man will, it is probable, for all practical purposes, supersede other works. "De la Criminalité chez les Arabes," by A. Kocher, a pupil of Lacassagne's, is a book of great interest, and the names of Bordier, Manouvrier, Bournet, etc., are well known in connection with criminal anthropology in France, while Féré ably represents the French school which explains criminality by degeneration.

In Germany the serious study of the criminal may be said to have begun with Krafft-Ebing, the distinguished professor of psychiatry at Graz, who, by laying down clearly in his *Grundzuge der Kriminal Psychologie* (1872), and other works, the doctrine of a criminal psychosis, and pointing out its practical results, deserves, as Krauss remarks, to be regarded as an important precursor of Lombroso. Knecht studied over 1,200 prisoners anthropologically. Dr. A. Krauss, who began with investigations into criminal psychology, has since done much solid work in criminal anthropology. Flesch made important observations on the morbid pathology of criminals; Benedikt, known in connection with various interesting investigations in criminal anthropology, began in 1879 with a remarkable study of the criminal brain, which he assimilated to that of the carnivora. His conclusions in this difficult field of research have been warmly combated by Prof. Giacomini, of Turin, and subsequent investigators. The brilliant Viennese professor has in his recently-published "Kraniometrie und Kephalometrie" shown himself the most original and suggestive of living students of the architecture of the skull.

In Belgium, where questions of prison reform have always attracted attention, and where Quetelet's great work, "Physique Sociale," inaugurated criminal sociology, the results of criminal anthropology have been received and

discussed with interest and sympathy, and various researches have been carried on, notably by Héger. In 1884 the Société d'Anthropologie of Belgium nominated a commission for the investigation of criminal anthropology. This led to various interesting investigations, none of them, however, of great importance.

In Spain and Portugal criminal anthropology is being prosecuted with much zeal. Among its chief representatives may be named especially Rafael Salillos, and Vera, and at Lisbon Bernardo Lucas. D'Azevedo Castello Branco's "*Estudos penitenciarios e criminaes*" (1888) should also be mentioned. In 1889, at a congress held in Lisbon, the relation of criminal anthropology to penalty, legal reform, and allied problems was fully discussed.

In the rapidly-developing Spanish countries of South America, criminal anthropology seems to be making great progress. It is officially taught at the University of Buenos Ayres. Luis del Drago, a judge in the Argentine Republic, with his "*Los hombres de presa*" (1888), and other works by other writers, witness to the progress made in this country. On the initiative of Dr. del Drago, with influential coadjutors, a society for the promotion of criminal anthropology was founded in Buenos Ayres in 1888 "to study the person of the criminal, to establish the degree of his dangerousness and of his responsibility, and to effect the gradual and progressive reform of penal law in accordance with the principles of the new school." In Brazil Prof. Ivão Vieira is the chief representative of the science.

In Russia and Poland, although the study of criminal anthropology dates from very recent years, it is making considerable progress. Bielakoff, in the "*Archives of Psychiatry*" of Kharkoff, studied 100 homicides. Prof. Troizki, of Warsaw, published a careful study of 350 prisoners. Dr. Tarnowsky, a lady, examined 100 female thieves as compared with 150 prostitutes and 100 peasant women. Dimitri Drill is engaged on a great work, of which one volume only is published at present, in which he deals thoroughly with the organic factors of crime, and with the social applications of criminal anthropology. The Russians seem to be characteristically audacious in their applications of the new science, and there is in Russia a feeling, not merely against imprisoning criminals, but even against secluding them. In 1885 a young girl assassinated a Jewish child to obtain possession for her lover of the money of the

child's father, a rich usurer. Prof. Babinski declared that she was not mad, but entirely devoid of moral notions, that she was incurable, and that it would be quite useless to put her in an asylum. She was acquitted.

In Great Britain alone during the last fifteen years there is no scientific work in criminal anthropology to be recorded. When Dr. Coutagne inaugurated in 1888 a "*Chronique Anglaise*" in the "*Archives d'Anthropologie Criminelle*," he could not conceal his embarrassment. While the Italian, Spanish, Portuguese, and Russian summaries are founded on a large series of works in criminal anthropology, in England there is absolutely no centre for the scientific study of criminality. "Legal medicine," he remarks, "has there inspired no special publication, nor any learned society. At the International Medical Congress of London, in 1881, although so remarkably organized, it was less well treated than laryngology or dentistry, and formed the object of no section, state medicine being almost synonymous with hygiene. If we consult the scientific journals of England dealing with allied subjects, our baggage will receive very few additions." In the case of this Journal only is Dr. Coutagne able to make a partial exception.* The chief English medical journal, while furnishing admirable reports of other congresses, gave not the slightest account of the International Congress of Criminal Anthropology recently held in Paris. At this Congress official delegates came from all parts of the civilized world, from Russia to Hawaii (including two from the United States), not one from Great Britain. When some twelve months since I issued a series of questions dealing with some of the main points in the investigation of the criminal to the medical officers of the larger prisons in Great Britain and Ireland, the answers that I received, while sometimes of much interest—and I am indebted to my correspondents for their anxiety to answer to the best of their ability—were amply sufficient to show that criminal anthropology as an exact science is yet unknown in England. Some of my correspondents, I fear, had not so much as heard whether there be a criminal anthropology. England has, however, in the past been a home of studies connected with the condition of the criminal. The centenary of John Howard, which we are about to celebrate,

* I should like to refer here to the praiseworthy little study by the Rev. W. D. Morrison, "*Reflections on the Theory of Criminality*," in this Journal for last April.

is a brilliant witness to this fact. Fifty years ago Englishmen sought to distinguish themselves by the invention of patent improved tread mills and similar now antiquated devices to benefit the criminal. We began zealously with the therapeutics of crime; it is now time to study the criminal's symptomatology, his diagnosis, his pathology, and it is scarcely possible to imagine that in these studies England will long continue to lag so far behind the rest of the civilized world. Certainly it is difficult to exaggerate the importance of such studies, not for their scientific interest alone, but for the "new horizons" that they open up, for their bearing on legal reform and on so many of the vital questions of social life.

An Abstract of 1,565 Post-Mortem Examinations of the Brain Performed at the Wakefield Asylum during a Period of Eleven Years. (Paper laid before the Psychological Section of the British Medical Association, August, 1889.) By F. ST. JOHN BULLEN, Pathologist to the West Riding Asylum, Wakefield.

The Abstract which has been made embraces fifteen hundred and sixty-five cases, and extends over a period of eleven years. Most of the autopsies, that is, the cerebro-spinal portion of them, were performed by Sir J. Crichton-Browne, Drs. Herbert Major and Bevan Lewis. Such statements therefore as are made may be accepted as faithful representations of the existent conditions so far as means allowed. It must be premised that, although the reports show evidence throughout of careful and conscientious work, and mostly are very full and embracing, yet there is some indefiniteness conferred by the absence of an exact and systematic method in their compilation. Nevertheless, it must not be supposed that such was always omitted; but that often where special lines of investigation have been pursued the results have not been incorporated in the records.

There will thus be encountered no few sections in which details are meagrely given, but which have been made, notwithstanding, the subjects of research, and concerning which much has been written and published.

Crania which depart from regular conformation are met with in a considerable number of cases, of which, however,

the great majority are instances of asymmetry merely. Those having some general peculiarity of configuration number over one hundred cases out of the sum total.

Were, in this last group, the cases present in larger number, some general inference might be drawn from the consideration of special forms occurring under the headings of different classes of insanity; but as it stands, it includes far too few. Moreover, the records do not furnish measurements or means by which correct comparison could be made. Here, however, must it be stated that such methods have not been omitted, as is evident from the complete paper on Cranial Outlines by Drs. Clapham and Clarke in Vol. vi. of the *Riding Reports*, although these latter observations were made on the living subject. Notwithstanding that the statements with which I have to deal are not backed up by quoted measurements, certain points have more or less prominence enough to deserve mention as possessing some consistence of disposition.

The broad, square, or circular forms of cranium appear more often in cases of mania; the elongated kinds in general paralysis and epilepsy; a dome-like vault occurs most in connection with mania and general paralysis. Large frontal development preferably chooses melancholia; insufficient brow-formation, epilepsy. It would seem that just as anomalous configurations of the skull exist in healthy individuals in the direction of defect, so under very opposite conditions, such as in imbecility, good development may exist. Thus though the majority of imbeciles may possess such conformation as might appear naturally co-related to the class, yet no few instances of capacious development, seemingly apart from the frontal breadth of the insane type, occur. That the latter indeed should be present not infrequently is to be expected, if the ratio of the frontal lobes to the remainder of the brain is constantly as indicated by the weights subsequently to be mentioned.

There is note made of asymmetry of the cranium in 20 per cent. of all cases, and appearing under different forms. Thus it manifests itself in more or less localized bulgings of the frontal, parietal, and occipital segments of the cranium—in generally increased or decreased unilateral capacity, or in the disposition of the skull-halves, so that one is placed before or behind the other.

As regards the first variety, or localized bulgings, they constitute about 40 per cent. of the cases in which

asymmetry exists; the left side presenting them nearly twice as frequently as the right.

The temporo-parietal and parieto-occipital regions absorb nearly 30 per cent. of these bulgings, the left side quite doubling the right in frequency of occurrence. The right frontal segment is, however, protruded in twice as many instances as the left.

The hemicapacity of the skull is also, as regards relative increase, more often enlarged on the right side, but not in excess of 20 per cent. The total cases of increased hemicapacity, of either side indifferently, amount to 50 per cent. of the asymmetries.

In connection with the preceding may be remembered the larger size of the right brain hemisphere, the superior dimensions of the frontal lobe of the same side, and of the temporo-parietal portion of the left hemisphere. However, the connoting stops at the occipital region, inasmuch as bulgings on the left side are more frequent than on the right.

Asymmetry appears more common in chronic melancholia than in other forms, and after that in epilepsy and general paralysis. From examination of the various kinds of asymmetrical configuration in the different classes of insanity, no important bearing is perceptible.

On contrasting the instances of increased hemicapacity with the weight of the corresponding brain-hemisphere, it is not found in any uniform degree that there is relationship between them, *i.e.*, the larger hemisphere and the larger side, (although generally it is as before stated, *viz.*, the right half is the more capacious), so that the increased dimensions must be compensated for, in some manner undescribed, in the skull elsewhere; or else the hemisphere of smaller volume, but occupying the larger cranial division, must have undergone greater proportionate wasting.

Taking twenty-nine successively-placed cases from the large number of those of dementia (including all forms), it appears that the larger hemisphere is the right in fourteen out of twenty-three cases—this, of course, not indicating the size prior to disease—whilst increased hemi-cranial capacity exists on the right side in seventeen instances as compared with twelve on the opposite. In only twelve of these cases do the hemicapacity and its corresponding brain-half tally. Nor is there any indication present of asymmetry of the skull following atrophy of its contents, or at least unequivocal

evidence of such. Increased thickness of the cranial bones does not seem, as far as arbitrary statements merely are concerned, to be of much frequency. Twenty-five per cent., about, of the total cases are said to be thus affected; another twenty per cent. are decreased in thickness, and the remainder are noted as being of average proportions.

The maximum number of hypertrophied calvaria is attained in epilepsy, together with the fewest of decreased thickness, whilst an approximately high percentage is found in cases of dementia from coarse organic changes. Frequency of hypertrophied skull-bones diminishes in the order of succession of the following: Chronic mania and melancholia, general paralysis and dementia, the minimum being reached in acute states of exaltation and depression. This last, on the other hand, possesses the most numerous instances of diminished thickness, senile mania and dementia following. The diaphanous skull encountered in chronic mental diseases is pretty frequent amongst imbeciles.

If the calvaria in the acute forms are the thinnest, it would appear that their density is the highest. Condensation of osseous tissue is also present in over half the cases of dementia from coarse organic changes, and in just the half of those of general paralysis, whilst porosity of tissue is most met with in chronic mania, and senile or sequential dementia.

Conjunct states of increased density and thickness are by no means frequent, as is evident from the foregoing; acute states which show the least thickness having the highest density, and epilepsy and chronic mania, though to a less extent, being still opposed in the same features. Regional thickening of bone, in any amount, is in the frontal segment of the skull.

Conditions indicating anæmia or congestion of the bones, *e.g.*, pallor, mottling, red or purplish discoloration, are not often noted. Pallor appears most often in melancholia, and especially in the acute form; so, on the other hand, congestion is least seen there. The latter is more to be noticed in connection with mania.

In the list of percentages of pallor-occurrence, all forms of dementia and epilepsy occupy the tail-end, whilst the same stand at the head of that denoting the relative frequency of signs of congestion. As a whole, a blanched condition is thrice as often quoted as the reverse.

Bony out-growths from the inner aspect of the calvaria are

infrequent enough, or only about one per cent. Neither are eburnations, rugosities, or localized disappearances of the inner table mentioned in any amount.

Membranes.—Undue adherence of the dura mater to the cranial surface, in varying degrees, is present in 16·6 per cent. The site of attachment is generally the frontal region; other parts, except as involved in a general adhesion, very rarely. The last occurs in 5·7 per cent. of the total cases, the remainder, or 10·9 per cent., being in the frontal region. Alterations in texture and vascularity are very seldom met with; the former, as thickening, only is noted in one per cent. The morbid adhesions appear most common in dementia, and least so in general paralysis and epilepsy; of the scanty changes of texture, the majority are numbered by general paralysis, the remainder fall nearly entirely to chronic mania and melancholia.

The associated condition with the greater amount of dural adhesion in dementia is not evident. It is not bone-hypertrophy, since, although dementia shows the next largest aggregation of such to epilepsy, yet in the latter adhesions occur but seldom;—neither increased density nor hyperæmia of the bones, for, as regards the first, general paralysis has as high a percentage, and, in the second, epilepsy is equal.

Textural changes in the pia-arachnoid constitute a large proportion of the morbid conditions encountered, and a variable, but always considerable, amount in the several classes of insanity. With the exception of opacities, relegated to the serous membrane, all other conditions, including vascular alterations, thickenings, œdema, etc., are grouped under the head of pial changes. In a few, vascular conditions play the most prominent part, and are, perhaps, the only morbid signs apparent; these are, therefore, given separately, as well as together with the other affections of the pia.

Regarding also the varied and, occasionally, rather fanciful denominations which are applied to the changes in the soft membranes, as well as to the fact that there is generally an association of these, even when one pertinent feature is alone mentioned, the percentage has been taken of cases in which some single or multiple departures from the normal have occurred. Thus defined, affections of the pia mater exist in 65·8 per cent. of the total cases; approximately all of which include increased consistence or bulk. Venous engorgement, in marked degree, is mentioned in about 10 per cent.; arterial injection in 3·3 per cent.

In 76 per cent. of the cases of general paralysis, some morbid condition of the pial membrane exists; in 5·6 per cent. out of this vascular changes alone are noted. This disease possesses the highest percentage, the next highest being furnished by chronic mania, melancholia, and dementia, in all and each of these meningeal changes being present in 65 per cent. of the cases. Purely vascular anomalies, alone mentioned in connection with melancholia, constitute 7 per cent. Lowest in the series is epilepsy, of whose 51 per cent. no less than 42 per cent. are conditions of vessel engorgement or injection.

Acute mania and melancholia show the same percentage as the chronic forms. In the first, however, half the changes are conditions of hyperæmia simply; no allusion to especial states of vascularity, on the other hand, is made in regard to melancholia. The intensity of the tissue changes in the acute forms is, of course, very slight as the rule; whilst it is hardly needful to remark that the same is greater in general paralysis and dementia than in all other varieties.

Opacity of the arachnoid occurs, or, rather, is noted, in 49·3 per cent. of the total cases. Some of these are, of course, slight in degree, being limited to streaks or cloudiness in the course of the vessels. Such initial changes are mainly found in epilepsy, where the totality is only 31 per cent., reduced to 20 per cent. by exclusion of these minor opalescences as alone existing.

The greatest proportion belongs to general paralysis, viz., 73·7 per cent., only 2·7 per cent. of which are of slight amount. Dementia, of all kinds, presents this change in 43·5 per cent., whilst less in both number and intensity are the opacities in chronic mania and melancholia, by six to ten per cent. The degree of the exudate is more intense in the former than the latter, and, as a rule, more extensive. Existing, though but very slight, in acute conditions of exaltation and depression, these cloudings of the arachnoid are disposed in the reverse manner to hyperæmia of the pia mater, since the percentage of opalescences occurring in melancholia is 42·0, being double that of mania. In both, these are nearly always limited to the sulci, and, generally, to those of the anterior half of the brain.

Adhesions betwixt the dura mater and visceral layer of the arachnoid are very rarely tabulated. They are mentioned as occurring but thrice in the temporo-sphenoidal region, once in the parietal, and once in the frontal, by fibrous

fasciculi. Those existent along the sites of pacchionian bodies and over ramollissements being, of course, excluded.

True meningo-encephalic adhesions, *i.e.*, not including cohesions betwixt brain and membranes in cases of cortical softenings, are described in 340 cases, or 21·7 per cent. of the whole. In 1·6 per cent. they are said to be universally disposed over the brain surface, and in 3·3 per cent. to affect the frontal-parietal portion of the latter pretty generally.

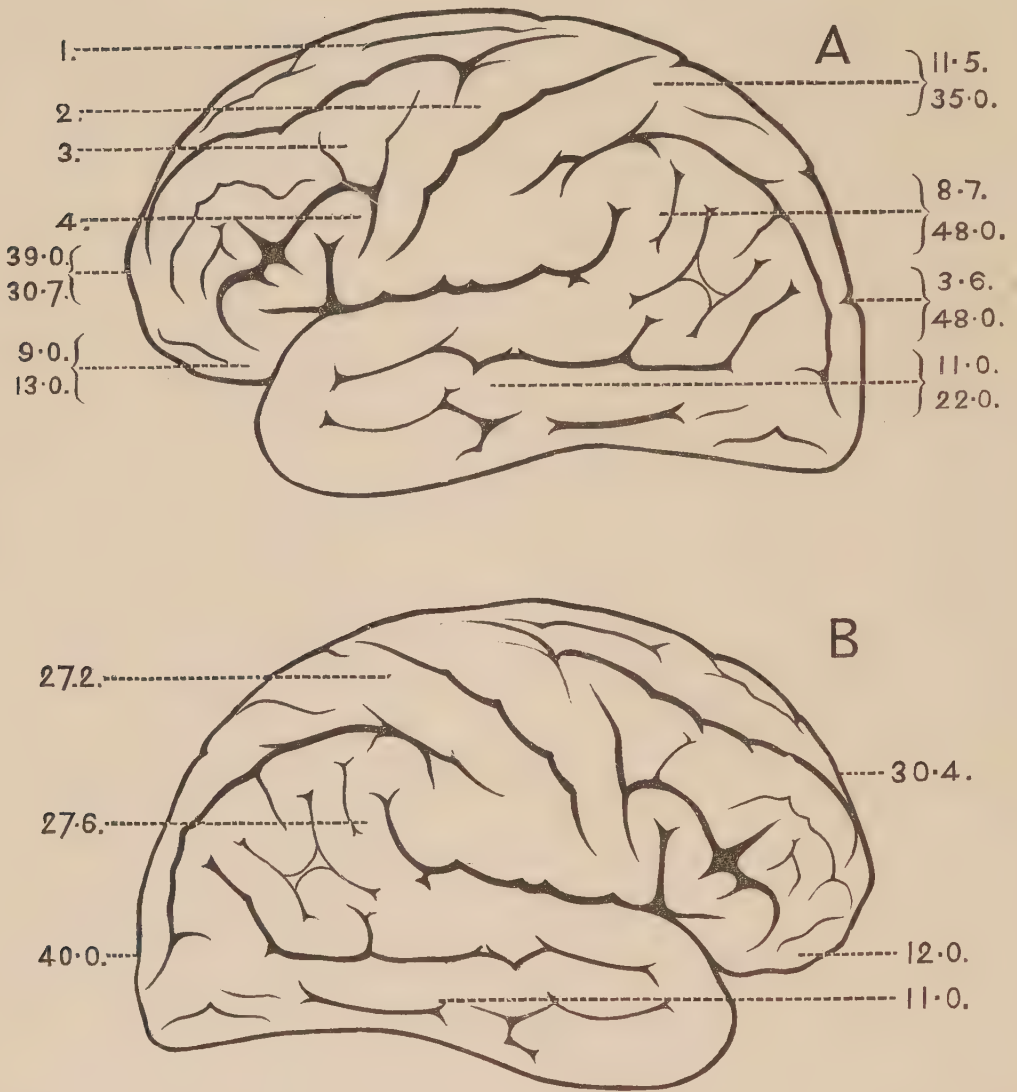
There are specified, as to locality, six hundred and sixty-six instances of adhesions. Of this number the frontal lobes absorb two hundred and sixty, or 39 per cent., and if the orbital surfaces be included, three hundred and twenty, or 48 per cent. The right and left hemispheres appear to share equally in 61 per cent. of the 260; the remainder of the instances are bilateral. Three-fourths of those occurring in the orbital lobes are bilateral, the rest one-sided and about equally divided. The gyri of the frontal lobes are affected as to frequency in the following order—first, ascending, second, and inferior.

To the parietal lobe, including the ascending-parietal gyrus fall one hundred and thirty-four instances, or 20 per cent., about, of the whole. Of these, the infra-parietal lobules claim fifty-eight, or 8·6 per cent.; the supra-parietal lobules, including the ascending gyrus, 11·5 per cent. Of the 134, the two hemispheres are conjointly affected in 39 per cent. Of unilateral foci, the left supra-parietal lobule possesses more than the right; the left inferior lobule nearly twice as many as the right.

The temporo-sphenoidal lobes are selected in about similar amount to the superior parietal lobules. Bilateral distribution is in over half the number; of the one-sided foci, the left is chosen nearly doubly as often.

The occipital lobes are sites in 3·6 per cent. (inclusive of annectants) and dual implication of the hemispheres seldom occurs. The left side, again, has more numerous foci of adhesion. (*Vide* Diagrams A and B.—p. 22.)

The infinite majority of cortical adhesions occur in general paralysis, their presence being noted in 61 per cent. of the cases. They are found next most numerous in dementia from coarse brain lesion—9 per cent.—and least plentifully in secondary and senile dementia—or 2·6 per cent.—whilst between these extremes, in order of frequency, are placed



DIAGRAMS A AND B.

In these, the lines drawn from the margin to the lobe, lobule or gyrus, indicate the relative frequency of adhesions at such sites, by the percentages attached.

Of the bracketed figures, the upper denote that the area to which they are joined is affected by adhesions in such a percentage of all occurring (both hemispheres being represented). The percentage allotted to each area, right and left, *i.e.*, of the number found in such a site only, is represented by the lower figures in each bracket, and by those in Diagram B. Thus, *e.g.*, the post-parietal lobules are affected in 11.5 per cent., and of the number so represented, 35 per cent. fall to the left side and 27.2 per cent. to the right.

TABLES II., III., IV., V., VI.—Percentages of (a) number of instances of sub-dural hæmorrhage falling to each of the preceding forms of insanity; (b) of cerebral wasting in the same; (c) of lessened consistency of the brain; (d) of ventricular dilatation; (e) of atheroma in the basal vessels.

(a)	No. of Cases.	Percentage of total Cases.
General Paralysis	49	13·4
Dementia	37	13·4
,, with Melancholia ...	8	17·0
Chronic Mania	11	6·7
Epileptic dementia	7	3·1
Acute Mania	1	—
Imbecility	2	—
	115	

(b) Wasting.	Total.	Ditto (exclusive of slight degrees).
Melancholia with Dementia ..	80·8	70·0
General Paralysis	79·2	70·8
Dementia	70·5	58·0
Chronic Mania	70·0	43·0
Epilepsy	38·0	21·0

(c) Lessened Consistency.	
General Paralysis	74·0
Melancholia with Dementia...	70·0
Dementia... ..	66·0
Chronic Mania	53·4
Epilepsy	23·7

(d) Ventricular Dilatation.	
General Paralysis	40·0
Dementia	24·0
,, with Melancholia	10·6
Chronic Mania	13·0
Epilepsy	8·9

(e) <i>Atheroma of the Basal Vessels.</i>						
Dementia	...	...	...	...	...	53·0
„ with Melancholia	...	...	...	...	...	36·0
Chronic Mania	...	...	...	...	...	31·8
General Paralysis	...	...	...	...	...	12·4
Epilepsy	..	...	...	...	...	10·5

Brain weights in relation to sub-dural hæmorrhage.—The average weight of the brain in cases of the above, and, as before, including all kinds of hæmorrhage indiscriminately, is 1,177 grammes.

The largest number of instances occur in connection with brain-weights between 1,100 and 1,200 grms., and a somewhat less number between 1,200 and 1,300 grms., respectively thirty and twenty-six cases.

A considerable interval is then left between the last-mentioned and those weights of next frequent selection, viz.: 1,000 to 1,050, and 1,300 to 1,350 grms., severally eight and seven cases.

TABLE showing the number of cases of meningeal hæmorrhage (sub-dural) found in connection with various brain-weights.

Brain Weights.	No. of Cases.
— — 800 grms.	1
800 — 850 „	1
850 — 900 „	2
900 — 950 „	4
950 — 1000 „	3
1000 — 1050 „	8
1050 — 1100 „	4
1100 — 1150 „	16
1150 — 1200 „	14
1200 — 1250 „	12
1250 — 1300 „	14
1300 — 1350 „	7
1350 — 1400 „	4
1400 — 1450 „	2
1450 — 1500 „	3

TABLE representing the cases of hæmorrhage found at varying periods of life.

Cases.	Ages.
6	30 — 35 yrs.
10	35 — 40 „
18	40 — 45 „
12	45 — 50 „
6	50 — 55 „
13	55 — 60 „
10	60 — 65 „
13	65 — 70 „
6	70 — 75 „
4	75 — 80 „
1	80 — — „

From the last table it appears that the most common age chosen is from 40 to 45 years; the next most frequent periods are embraced from 55 to 60, and 65 to 70 years. The main part of the cases furnishing the number found between 40 and 45 is contributed by general paralysis; of those between 55 and 60, by dementia and chronic forms of mania and melancholia; of those between 65 and 70, by chronic mania and dementia.

Thus it will be noticed from the foregoing tables that the principal associations with sub-dural hæmorrhages are those of brain-wasting, in company with lessened consistence and dilated ventricles, and atheroma, except in the case of general paralysis, in which the possession to a greater extent of the preceding conditions, compensates, probably, for the comparative infrequency of the vessel disease.

Of one hundred and three cases, the cyst, membrane, or hæmorrhage was bilateral in forty-two; on the left side in thirty-five; on the right in twenty-six.

Ramollissements, not inclusive of those situated in the central grey masses, are described in one hundred and forty-nine cases; and indurated patches, the result of previous softened states, in seventeen more, making a total of one hundred and sixty-six, *i.e.*, 10·5 per cent. of the whole chronicled autopsies. The causes embrace hæmorrhage, vessel plugging, cysts, and growths; and of the first of these,

active signs existed in 24 per cent. 3·3 per cent. only resulted from tumours, caseous deposits, etc., whilst the great bulk, or 73·5 per cent., are assignable either to vessel-plugging, or have been originally caused by hæmorrhage, signs denoting which, excepting, perhaps, some discoloration where a cavity is present, have become equivocal.

The number of distinct foci countable amongst these hundred and sixty-six is three hundred and ninety-eight. The latter are distributed in greater proportion to the left than the right hemisphere, the percentage being respectively 50·5 and 46·2. The disposition of the above number of foci to the different lobes, segments, and gyri of the brain is indicated by the ensuing table:—

Frontal lobes, including orbital surfaces	27·5 per cent.
Parietal lobes	20·25 „
Of which the superior lobule and ascending gyrus	10·25 „
Of which the inferior lobule	10·0 „
Of the inferior lobule, the supramarginal	4·0 „
Of the inferior lobule, the angular... ..	6·0 „
Temporo-sphenoidal lobes	12·0 „
Occipito-annectant lobes	16·0 „
Of which the occipital in	9·3 „
Of which the annectants in	6·7 „

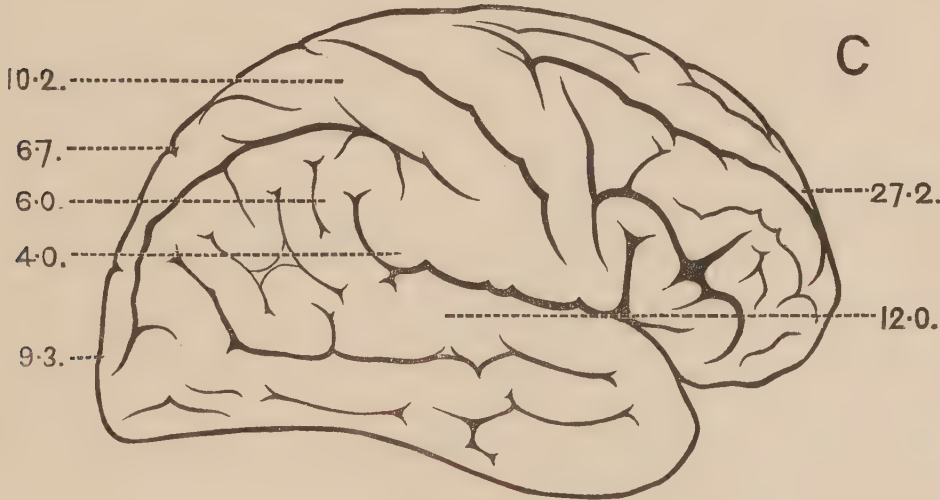


DIAGRAM C.

Indicates relative frequency of ramollissements in various sites of the brain-surface. The same plan adopted as in Diagrams A and B.

The following gyri are individually classed : Marginal, 2·6 per cent. ; insular, 2·6 per cent. ; hippocampal, fusiform, and

lingual, 2·7 per cent.; fornicate, 2·0 per cent.; opercular, 0·5 per cent.; unspecified sites in centrum ovale, 9·0 per cent.

In only slightly more than a hundred cases is mention made of the vessels individually in instances of softenings, either as to special trunks being intact, principally or solely diseased or actually occluded. Therefore, incorporating these cases, and disregarding the occasionally varying disposition of the arterial system, the following vessels with their branches are, arbitrarily, tabulated, inasmuch as from them, generally speaking, the softened areas are supplied.

First, in order of frequency, are the sylvian arteries, which claim no less than 65·8 per cent.

Of these, the parieto-sphenoidal branches absorb 46·1 per cent.; the rolandic, 16·7 per cent.; the inferior frontal in 3·0 per cent. This latter artery is also reckoned with the orbital branch of the anterior cerebral in certain instances where a joint supply exists. It is involved in 3·5 per cent. This is, then, counted amongst the following—The anterior cerebrals are implicated in 30·0 per cent. Twenty-four per cent. of this (excluding the inferior frontal of sylvian origin) is divided between their orbital and marginal rami. The branch to the quadrate lobule only appears in 0·5 per cent.; that to the inner aspect of the hemispheres, above the callosal commissure, 2·0 per cent. Last in the list are the posterior cerebrals, forming fifteen per cent.; of this their temporal branches take up 2·0 per cent.; the occipital, 12·3 per cent.

The great majority of softenings occur in dementia. Of the total number of cases, 55·0 per cent. fall under this heading. Next in degree of frequency are chronic mania and melancholia, without prevalent dementia, and epilepsy, in these two classes softening constituting severally a feature in 16·0 and 8·0 per cent. It only appears in 4·0 per cent. of the cases of general paralysis, and still less often in amential and acute states.

Conditions indicative of the cause of softenings are given in 82·0 per cent. of all cases. Atheroma constitutes of the entire number 70·5 per cent., part of the remainder being growths, emboli, and deposits.

In the cases of dementia with softening, atheroma is present in 90 per cent. at least; the remaining instances being almost all accounted for by the causes just quoted.

In chronic insanity, without dementia, atheroma is noted in 66·5 per cent. ; in epilepsy only in 26·0 per cent. ; emboli are assigned as causes in a further 8·0 per cent.

In dementia, the proportion of left to right-sided softenings is as sixty to thirty-eight, about.

The frontal lobes are nearly equally affected, and constitute 27·0 per cent., inclusive of orbital surfaces.

The lesions in the supra-parietal and occipital lobes are also equally divided ; twelve per cent. is allotted to the former, ten per cent. to the latter.

Of the 15·1 per cent. falling to the infra-parietal lobules, 11·4 per cent. belongs to the left side, and is divided exactly between supramarginal and angular. On the right side, two-thirds of the remainder go to the former.

Three-fourths of the softenings in the temporo-sphenoidal lobes are on the left side, whilst 7·4 per cent. out of 10·5 per cent. of those affecting the annectant gyri are similarly disposed. The left insula is to right as 3·1 per cent. to 1·2 per cent.

Of the instances of softening occurring in epilepsy, 51·0 per cent. are located in the frontal lobes, and the right side is nearly doubly as often affected as the left.

The remaining ramollissements are not sufficiently numerous when allocated to the different classes of insanity to be grouped under their headings with a view to studying any possible feature of interest therefrom.

Lesions of the basal ganglia, capsules, and claustra are found in one hundred and sixty-six cases, or 10·5 per cent. of the total cases, that is, in the same number as ramollissements of other-described parts of the brain.

These lesions appear as recent hæmorrhages, as old apoplectic cysts having stained walls and rusty contents, or cavities of softenings, with walls free from staining, and holding clear or somewhat turbid fluid, or as holes and depressions in the cerebral substance appearing as if punched out ; and, lastly, as patches of induration following former softening.

Hæmorrhage, old or recent, seen as clot or cavity, with stained walls, and, perhaps, rusty contents, exists in 20·5 per cent. of the cases of lesion. In other 67 per cent. of the latter, the origin is not indicated in a sufficient number, either directly, or by the detail, to enable any grouping under causal conditions. Sclerotic patches, the result of reparative efforts subsequent to soften-

ing, of new growths, caseous masses, are present in 12·5 per cent.

The number of different foci, or the segmental distribution of the lesions in the ganglia, capsules, and claustra, is three hundred and sixteen, and these are apportioned in the following manner: To the corpora striata about 40·0 per cent. are allotted, and these bodies are about equally affected on the right and left side. The optic thalami are sites of softening in only a little more than half the amount, or 23·7 per cent., and the left body is implicated somewhat more often than the right.

All the segments of the lenticular nucleus included, this body is involved in 20·0 per cent., or with just half the frequency of the intraventricular body. In 11·7 per cent. of this number the several segments are not individually specified; in the remainder, or 8·5, the third division is alone affected. In both groups the proportion of left to right, somewhat larger, is constant.

The claustrum forms a site in 3·8 per cent.; the internal and external capsules severally augment this by an increment of 1·5 per cent. (5·3 and 6·8 per cent.). In all these the left side is more often affected.

Thus, with the ganglionic lesions, as with those of the surface-portions of the brain, the left hemisphere is especially often chosen, the percentage being, indeed, somewhat higher than that of the same side in the latter cases.

Out of twenty-seven instances, in which the locality of the focal lesion is roughly denoted in the corpus striatum, seventeen appear in its posterior portion. The inferior, anterior, internal, and external parts are affected in order of succession—four, three, two, one. In half the cases in which mention is made respecting locality, the posterior end of the lenticular nucleus is implicated, and in a similar proportion of the instances afforded by the thalamal bodies, the pulvinari are chosen. One third of the rest occurs in the anterior tubercles.

The association of these latter softenings with the different forms of insanity follows the same order as in the case of those located in the brain-periphery. Dementia of all kinds includes nearly 70·0 per cent. of the instances noted, and of the sites affected the corpora striata and thalamal bodies absorb respectively nearly two-thirds and one-third.

The chronic forms of mania and melancholia divide pretty

equitably, 16·0 per cent.; and the optic thalami are implicated in 3·4 per cent. of the latter cases, but do not appear in the former. Few are enumerated in epilepsy, 9·7 per cent., and five-sixths of these belong to the corpus striatum. With the exception of acute mania, general paralysis comes last in order of frequency, or only 5·6 per cent.

Taking the sum-total of focal lesions, and estimating the various contributions furnished by the above several classes of insanity in relation to the number of cases each represents, it appears that the order in which the latter stand is the same.

Atheroma of the basal vessels exists in 72·5 per cent. of the cases in which lesion occurs in the central ganglia.

Cerebral Atrophy.—With respect to this, the absence of any system of metric chronicling renders results of but little value. No indication otherwise than by terms of much extension, such as “slight, moderate, great,” etc., is given. Excluding, however, degrees of wasting, the latter is noted as present in 67·5 per cent. of the total cases, or one thousand and fifty-five. More or less the entirety of the brain is described as affected in 36·7 per cent., or five hundred and seventy-four cases; in two hundred and sixty of these last, areas of wasting in especial intensity are combined with the general atrophy, and such exist without the latter in 30·7 per cent., or four hundred and eighty-one instances. There are mentioned eight hundred and thirty-three sites of partial brain-wasting, of larger and smaller extent. Nearly one-half, or 46·0 per cent., are the fronto-parietal lobes as wholes; not quite one-ninth are the frontals alone. Solitarily affected are the temporo-sphenoidal lobes in 2·0 per cent., and the occipitals in 1·5 per cent.

As shown by a table specifying the individual areas singled out by wasting, in the frontal region the latter is mainly centred around the posterior portions of the three gyri, more especially the first and the ascending convolution. In the parietal lobe, the supra-marginal and angular are less affected than the superior parietal lobule.

In connection with the subject of brain-wasting may be taken the results of weighing the different lobes of the brain in the various forms of insanity. The parietal and occipital lobes have only been weighed unfortunately in a few cases; to wit, ninety-six; the frontals, however, in a large number, four hundred and eighty-nine.

The divisions of these lobes were made after the mode de-

scribed by Sir J. Crichton-Browne, and some of the weights quoted were taken from the series published by him in "Brain." Vol. I and II.

No. of Cases.	Class of Mental Disease.	Brain.	Frontals.	Frontals compared with Brain as 1000.
126	General Paralysis	1195	412	344
36	Chronic Mania	1307	468	358
155	Dementia	1258	452	359
15	Monomania	1321	477	361
20	Acute Mania	1353	489	362
12	Acute Melancholia	1327	482	363
44	Chronic Melancholia	1310	477	364
50	Epilepsy	1299	472	364
12	Recurrent Mania	1332	488	366
12	Imbecility	1280	468	365
7	Idiocy	1250	457	366
489				

No. of Cases.	Parietal Lobes in—	(Brain, as 1000).	Occipitals in—	(Brain, as 1000.)
26	Dementia... ..	196·4	General Paralysis ..	97·0
13	Chronic Mania	197·7	Melancholia	98·0
17	Melancholia	210·1	Epilepsy	102·0
22	General Paralysis	224·4	Dementia... ..	104·4
18	Epilepsy	243·4	Chronic Mania	108·0
96				

The weight of the frontal lobes in the cases of idiocy and imbecility is somewhat remarkable. No discernible fallacy appears, however, to attach to these cases in especial, and they may be suffered to remain on the list as being at least as correct as the rest.

The brain cortex shows pallor more frequently than any other change, over half the cases, or 53·0 per cent., having this feature. It occurs in all forms of insanity, but not indifferently, appearing far more often in states of acquired

mental weakness. Of these, a class of cases in which the organic changes are pronounced, dementia with depression, present this condition of blanching most frequently, or in 80·0 per cent., whilst it exists also in 60·0 per cent. of secondary and senile dementia. Chronic forms of mania and melancholia possess it in rather over half their cases; in the same proportion it is present in acute depression, and in 30·0 per cent. of the cases of acute mania. It is noted in 40·0 per cent. of those of general paralysis, and least of all in epilepsy, or only about 18·0 per cent.

Such conditions of congestion as are described fall, with but few exceptions, to the share of epilepsy and general paralysis.

Atrophic thinning of the cortex is noted in 36·5 per cent., and appears most frequent in general paralysis, constituting a feature in over 60·0 per cent. of its cases, and least often in acute mania, or 6·5 per cent. Acute melancholia and epilepsy show it in about 15·5 per cent. each, but although the former more than doubles the percentage found in the preceding state, yet in chronic conditions the order is reversed and mania has a percentage about one-third larger than melancholia, or 36·0 per cent. Occupying somewhat intermediate position between this last and the highest percentage of general paralysis, come dementia and senile mania.

Other states and aspects of the cortex are mentioned in fair aggregate number, but evidently not noted systematically; they are therefore left unconsidered.

Atheroma of the basal vessels receives mention in four hundred and ten cases, or 26·0 of the total. It is present, to a considerable extent, either generally dispersed or in special trunks only, in one hundred and seventy-five cases, and to a less degree in two hundred and thirty-five.

The relative frequency in which the main trunks appear affected is the following:—

Middle cerebral, 38·0 per cent.; basilar, 30·0 per cent.; posterior cerebral, 21·0 per cent.; carotid, 10·0 per cent.

Its percentage in the different forms of insanity has been already tabulated, with the exception of acute mania and melancholia, and the chronic form of the latter. In this last 30·0 is noted, in the acute variety 11·4 per cent., which nearly trebles the proportion in mania, only 4·0 per cent.

Deviations from the usual calibre and arrangement of the basal vessels are not seldom found, although no proportion

can be here advanced with any degree of justification. More variations occur in connection with the posterior communicating arteries than in all the others, it would seem, and often without obvious compensatory purpose. Increased and decreased dimensions on the right and left sides in a sufficient number of cases apparently balance themselves. Whatever be the changes, however, they occur in general paralysis much more than in other forms; this statement applying not alone to the variations in the communicating, but to all the segments of the circle of Willis.

The following variations in the disposition of the basal vessels may be mentioned as occurrent, as regards the communicating arteries of the antero-posterior systems:—(1) Either may be absent; (2) may be replaced by a branch from inferior cerebellar, internal carotid, posterior cerebral, or two small nutrient branches respectively from the last two vessels; (3) may supply unusual regions; (4) may be unconnected with the carotid system.

The anterior communicating may be absent or merely rudimentary, or the single trunk replaced by two. With respect to the posterior cerebrals (1) either may be absent, (2) may be a branch of the carotid system, (3) replaced by a large posterior communicating (4) by two thread-like vessels from the basilar.

Either anterior cerebral may be (1) replaced by two small trunks, or be (2) absent, its region being supplied from the division of the existing artery of the opposite side.

The variations in the vertebrals described are but occasional. Such may be (1) absence of one, the existing vessel being joined by a branch from the opposite carotid, (2) both may join the basilar on the same side, (3) one may be represented by two or three branches before entering into the formation of the basilar trunk.

Dilatation of the lateral ventricles has been already alluded to in the table appended to sub-dural hæmorrhages. It is, seemingly, not altogether concurrent with general brain-wasting. In the acute varieties of mania and depression the frequency of its occurrence is widely differing, being found in 13·0 per cent. of the former, and in only one instance out of twenty-six in the latter. It is, again, noted in chronic mania nearly twice as often as in melancholia.

The granular condition of the ventricular endyma is met with in all varieties of mental diseases, but is, beyond all others, a feature of general paralysis appearing in 31·0 per

cent. of its cases. It is next often found in those of organic dementia, but here in less than one-fourth the proportion of the preceding. In epilepsy, dementia, and chronic melancholia, the percentage is in each about 5·7 per cent.; acute mania has twice the ratio possessed by the chronic form, this last being only 2·0 per cent.

Cerebellum.—Besides conditions of hyperæmia, or the reverse, not often noted in connection with the cerebellum, the latter is found affected by hæmorrhagic extravasations, ramollissements, sclerotic wasting, etc., in a few instances. The first, or hæmorrhagic effusion into its substance, occurs eight times on the right side and four times on the left; once into the middle lobe; whilst in two instances the site is undescribed.

Ramollissement appears ten times on the left side to six on the right. Two of the former instances and one of the latter have their locality in the corpus dentatum. There are in addition five whose position is not indicated. Some dozen cases of focal or hemispheric wasting exist, the proportion on the left side being somewhat larger. In two instances sclerotic wasting of one hemisphere was accompanied by shrinking and disorganization of the corresponding or opposite olivary body.

Cancerous disease once and caseous deposits twice, in the substance of the organ, were met with.

There still remain some few morbid appearances to take note of, and these will be included in the summary now to follow, under headings with which mainly associated. This summary it has been thought advisable to make in order to briefly co-relate the chief coarse appearances with certain forms of insanity.

In the brains of patients who have died during the *acute stages of mania and melancholia*, absence of any coarse and notable changes occurs in no few cases. Moreover, when present, the latter are in many instances common to both the preceding classes, or are found alternating, as it were, and by no means consistently attendant on either.

There is, thus, no evidence of marked characteristics pertaining to these recent forms of insanity; many of the alterations seen are initial stages of those met with in chronic insanity, and are results of causes acting on both in a common fashion.

The calvaria in *acute depression* are the thinnest, on an average, met with, and the most dense; and in *mania* also.

this last condition exists, but not the former; a skull of average thickness appearing usually. In both, pallor of the bones is more common than amongst the remaining varieties of insanity.

Meningeal changes occur with some constancy in one form or another. Cloudiness of the arachnoid is frequent enough in *melancholia*, infrequent in *mania*; it is, however, but slight in amount, comparable to that found under healthy conditions in senile brains, and generally limited to the sulci.

Changes in the pia mater are also common and equally slight in degree. Of those belonging to *mania*, half are conditions of hyperæmia, active or passive, whilst in *melancholia* such last states are almost *nil*.

Meningo-cortical adhesions are very infrequent; of those occurring, however, *mania* claims the greater number. For certain, hyperæmic states are more common, too, in the *last*; but, on the other hand, viewing them relatively to reverse conditions, *e.g.*, pallor in *mania*, they are in the minority. The most vigorous states of the former are seen in the acute stage of general paralysis; here occasionally is the brain-cortex found claret-coloured from intense congestion, or specked by dark patches of miliary hæmorrhages, whilst the medullary substance is of a diffuse pinkish or dirty-red hue, and crowded with coarse, engorged vessels. Such instances are uncommon, however.

Regarding the course which acute insanity runs, that any amount of wasting or serous infiltration should be encountered is not likely. The *first* is, nevertheless, present in towards half the cases of *mania*, and quite two-thirds of those of *depression*; their intensity, however, does not bear relation to their number. Atrophy is also not found to any extent, as indicated by brain-weight or configuration, by serous accumulation, or gross meningeal changes.

Lessened consistence and œdema of the brain appear more often connected with *melancholia*, and anæmic conditions, sometimes general diffused blanching, are disposed in the same way; in the case of the cortex, pallor being found nearly twice as often, and in addition some degree of thinning more than twice, as in *mania*.

Only a single instance of ramollissement is present amongst all the cases of acute insanity. Atheroma of the basal vessels is met with in an unimportant number of cases, indicating, however, a preference for *melancholia*; *dilatation*

of the ventricles is also seldom occurrent, but is decidedly more conjoined with *mania*, whilst a granular condition of their lining membrane, though infrequent, yet is about equally distributed.

One circumstance is worthy of mention, viz., that, of the few cases which have note made of their convoluntary arrangement, in *acute melancholia* the latter in 80 per cent. is very simple, in *mania* quite the reverse.

In *chronic forms of mania and melancholia* are seen not alone intensifications, by prolonged continuance, of certain changes found in acute insanity, but, on the other hand, opposite conditions to some of them, and in great part appearances due to substitution processes merely: a levelling of the individual features by the onset of mental weakness in these states confers in their advanced stages a common similitude in the greater number of what may be, in early periods, distinctive details. Whereas in *acute forms* we seldom find a thick, porous state of the cranial bones, under these *chronic* conditions we equally sparsely find thin or condensed osseous tissue. In the *former*, the anæmia of the calvaria was remarked, and this is extended to the *latter* above all other classes of insanity.

Alterations in the texture of the dura mater are so rare as to barely need mention; they are, however, saving general paralysis, mostly associated with chronic mania and melancholia. Whilst, proceeding to the consideration of the pia-arachnoid, opacities in the latter are less notable in *acute mania* than in *depression*, yet under chronic conditions the reverse obtains; in both, however, thickening and clouding are present but to moderate extent, if pronounced secondary changes are excluded.

Meningo-encephalic adhesions are very seldom met with, and generally associated with a cortex-condition favourable for laceration.

Arachnoid cysts and sub-dural hæmorrhages generally—taking for the moment states of exaltation and depression as unconjoined with marked secondary dementia—have allied themselves entirely with the former, and are only noted, and even then to less extent, with the latter when associated with prevalent mental weakness. Conditions of hyperæmia are seldom mentioned, as such, although their existence in connection with certain discoloured states of the medullated brain-substance may be inferred in considerable number. But anæmia is distinctly the commoner appearance as

chronicity advances, and especially as structural changes, co-related to mental reduction, take place.

Atrophy of the cerebral substance is present in rather more than two-thirds of the cases, and to about an equal extent in *melancholia* and *mania*, as regards marked degrees of the process, whilst an excess in the minor stages, though not considerable, belongs to the latter, as was the case with the changes in the pia-arachnoid.

Pallor of the grey cortex is more common to *melancholia*, whilst thinning is notably more frequent in *mania*.

To the former are allotted more of the instances of brains obviously lessened in consistence and of those of granular ependyma than fall to the latter, whereas, in this last, dilatation of the ventricles occur twice as often.

Hæmorrhages into, and ramollissements of, the brain-substance occur not often. Thus, of all such cases, the two forms of chronic insanity at present dealt with absorb sixteen per cent., and this they divide pretty equally. And as the above lesions occur with impartiality, as regards number, in the basal ganglia and in the superficial strata of the brain, so an equal proportion of them in either locality falls to *mania* and *melancholia* severally. Taking, for a moment, the focal lesions in the basal ganglia in these cases, it is observable that three-quarters of the foci are distributed in *melancholia* to the optic thalami, whilst not one happens in those bodies in *mania*.

Atheroma of the vessels, similarly to these preceding lesions, is distributed in about equal amount to the two forms of chronic insanity; a majority of one-and-a-half per cent. alone belonging to *mania*. A larger proportion of well-convoluted brains pertains to chronic *melancholia* than to any other form of insanity, so far as can be judged; and of those organs whose convolutionary arrangement is described no instance is mentioned of any defective development, or condition indicative of reversion.

It can hardly be said that appearances exist which by themselves are distinctive of *general paralysis*. Nevertheless, there are many common to it and other varieties of insanity which, by their grouping and aggregation in especial plenitude, denote certain characteristic features, having rightly an association with this disease.

At the same time, it may be said that remarkable exceptions to the invariable possession of any or many of such changes, as are viewed (by reason of their intensity or

frequency of occurrence) as especially conjoined to paralysis of the insane, by no means seldom appear to exist, so that in cases where from the clinical history pronounced alterations of a certain kind may be expected, there may prove to be a singular and perhaps inexplicable exemption. Notwithstanding this, there is to be observed a perceptible alliance between certain classes of cases and the collective post-mortem signs corresponding.

Regarding, in order, the tissues affected, the *skull-bones*, as usual, come first under notice. The changes in the osseous tissue are principally those of condensation, and a degree of this is found in half the cases, whilst, and perhaps as a resultant condition, increase of thickness appears but in less than one-third. Pallor is present more than twice as often as congestion, but neither constitutes any notable feature.

In the dura-mater is seen the first indication of one of the more prominent pathological associations of general paralysis, viz., *the intensified changes in the brain-membranes*. This rarely-altered internal periosteum shows its very infrequent thickenings and occasional states of injection, almost alone in this disease. *The meningic changes are, however, centred mainly in the pia-arachnoid*. In no other variety of insanity do these membranes become so universally or intensely implicated, viz., in somewhat over three-quarters of the cases, out of which about *a twentieth part* alone may be subtracted for instances of altered vascular conditions solely. Conjoined with textural alterations of other kinds are, in almost equal amount, *opaque states of the arachnoid*, exceeding both in generality and degree all similar appearances met with, as a rule, even in the most chronic forms of mental disease. Of approximately three-quarters of the cases in which these were present, in only *a fortieth part*, about, are these opacities of slight nature.

Of all occurrences familiarized with general paralysis, adherence of the membranes to the brain-cortex is perhaps the most recognized. Its frequency is so infinitely greater than—or rather its connection is so small with—brain-diseases other than this one kind that it at once co-relates itself to the latter in an indisputable manner.

The disposition of the sites affected by *adhesions* has been already described, and as they nearly all belong to paralysis of the insane, a reconsideration in particular connection with the latter is unnecessary. A very striking accompaniment of this disease, both from its nature and notably frequent asso-

ciation with the latter, is *hæmorrhage into the arachnoid cavity*, which is present in rather over a *seventh* of the cases. This equals its frequency of occurrence in *dementia*, although in the latter *atheromatous disease of the vessels* is present nearly *five* times as often as in general paresis. But, as may be seen from the tables given in conjunction with the subject of sub-dural hæmorrhages, there are suggestive conditions potential to counterbalance the deficiency in one auxiliary factor. With the exception of a limited number of cases classified separately as *dementia with depression*, with which equal (and which universally possess a great intensity of pathological expressions of reduction), *paralysis of the insane* presents the most numerous combination of brain-wasting, reduced consistence, and morbid changes in the medullary substance (apart from focal lesions); and the difference between the amount of the atrophy in this, and, with the previous exception, in the other forms of insanity, becomes still more marked when minor degrees are subtracted. The common features of wasting, flabbiness, œdema, and discoloration of the white matter are thus in greatest array here, the frequency of crowded and coarse vessel-puncta in the latter situation contributing to the rusty hue so often noted.

Far exceeding its ratio of concurrence elsewhere, *thinning of the cortex cerebri* is to be found, and though *pallor* of the same is noted in not much less than half the cases, yet states of dark discoloration, even approaching a claret hue in the acute periods, and those of a peculiarly granular, rough, loose kind, are more mentioned by far than in any other mental disease. There are two other physical conditions which occur more frequently in G.P. than elsewhere, and these are *dilatation of the ventricles* and *granular disease of their lining membrane*. The former exists to nearly double the extent that it does in *dementia*, which otherwise possesses the largest number of instances, whilst the latter is comparatively and relatively in infinitely larger amount.

As before intimated, *atheroma* is infrequent in the basal vessels of these cases; indeed, with the exception of epilepsy and the acute insane states, its appearance is the least common. Substituting *amentia* for epilepsy, the same exceptions may be said to intervene between *general paresis* and *zero*, as regards the affection by focal lesions, in the shape of *ramollissements* and *hæmorrhages*, occurring in any portion of the brain.

The percentage of brains simple in configuration, amongst those whose convolutionary arrangement is alluded to, is larger than in other classes of insanity, saving epilepsy and amentia. Not least interesting of those, showing some departure from ordinary conformation, is the existence in one of a well-marked external perpendicular fissure, a perfect "*operculum lobi occipitalis*" being present (another instance of this occurring amongst the cases of dementia).

Just as many common textural changes, by especial congregation or intensity, constitute an assemblage peculiar to general paralysis, so in *epilepsy* the same specialization is afforded in some degree by negative conditions in contrast. Thus there are many tissues in which appearances of chronic disease seem reduced, in comparison with their manifestation in other forms of insanity, to a minimum; and where they are present it cannot always be said with positiveness how much is not due to the ongress of mental decay. On the other hand, there are a few positive conditions which have connection with epilepsy in the same way that others may have as regards general paralysis.

The largest proportion of hypertrophied calvaria exists in *epilepsy*, and somewhat less than half its cases show in addition *osseous condensation*. It runs parallel with dementia in presenting the highest percentage of appearances of *congestion* in the bones, and also the smallest of *pallor*, whilst, together with general paralysis, it owns the scantiest number of adhesions of the dura-mater.

Changes in the pia-arachnoid are infrequent when, that is to say, purely vascular conditions are excluded. These latter, which are noted in the majority as states of venous engorgement, in the minority as those of active arterial injection, constitute no less than four-fifths of the total.

Similarly, *opacities of the arachnoid* are least met with in this of all chronic forms of insanity, and less marked; two-thirds of such instances as occur being of very slight degree, mostly limited to the sulci and vessels.

Meningo-encephalic adhesions are so rare as hardly to need mention. In part with the sparse implication of the membranes, it may be recalled, *meningeal hæmorrhages* have their *least* frequency of occurrence in epilepsy, of all the varieties of insanity in connection with which they are mentioned in this abstract.

Two important conditions, namely, *wasting*—both in frequency and amount—and *diminution of consistence*, are com-

paratively very seldom met with. As regards the *former*, it is actually found in the smallest proportion, not excepting *acute conditions*, though it goes without saying that degree here is not included. Nevertheless, nearly half these cases, few as they be, are trivial in amount. The *latter condition* is also—saving acute insanity—not only the most infrequent in occurrence, but a *reverse* state, that of firmness, is present in a larger share of the cases than any other form of chronic insanity can claim.

Indications of congestion fail to contribute any important feature. About one-quarter of the entire cases only possess them. On the other hand, *pallor* of the cortex is present in half the number of the latter. Occasionally, however, states of very marked congestion are found, almost comparable to those seen now and again in general paralysis; and again a coarse or granular aspect, such as exists in the latter, is observable. *Thinning* of the superficial grey lamina is infrequent.

Morbid changes in the *medullary matter* are noted in but one-fourth of the cases, but amongst these are the largest number of instances chronicled of decided induration, or pinkish coloration from free injection. Other lesions, inclusive of *arterial disease*, *granular state of ependymata*, *ramollissements* and *hæmorrhages* are sparsely found, as also evidences of *ventricular dilatation*.

Induration of one or both hippocampi is found in just half the number of cases of *epilepsy*, in which either negative or positive statement regarding its existence is made. Unfortunately, however, such is only systematically chronicled in nineteen cases in the reports under process of synopsis, but it has been ventured to add fifteen more cases—in which the presence or absence of induration in these parts is noted—from the more recent records, which embrace, as a matter of system, an affirmative or negative remark in respect to this feature, amongst others. In both groups of cases the proportion between those which do or do not possess a hardened cornu ammonis is the same, and appears in the total number as seventeen to seventeen.

In respect to the *absence* of this character, this may be connected with a much-diminished consistence of the brain in some cases, but not in all. Moreover, it may again be wanting when the organ possesses a typical firmness and resistance. In not a few cases the affection is unilateral. In two cases only is *sclerosed puckering of the cortex* mentioned

in connection with these cases of epilepsy, in which the condition of the hippocampi is noted. In one of these the latter were unaffected, in the other hardened. Neither of the last, nor any of the others, showed *meningo-cortical adhesions*.

Superficial sclerosis are only present in about 6 per cent. of the cases; appearing as corrugations, linear furrowings, or granular roughenings of a hardened cortex. In only half of these is any change in the membranes existent, and that but slight, and meningo-cortical adhesions but in two instances. Similar cortical puckering, with induration, is noted in cases of general paralysis, also melancholia, but more rarely.

Over half the number of brains examined with regard to convolutionary complexity are described as below average complexity. In one instance of interest the central gyri of one side were absent, and they and the postero-parietal lobe replaced by four closely-pressed convolutions, running from before backwards to the occipital lobe, which latter and the temporo-sphenoidal appeared normal.

*Assistant Medical Officers in Asylums: Their Status in the Specialty.** By Drs. DODDS, STRAHAN, and GREENLEES.

A year ago this Association did four of us the honour of placing us on its Council as representatives of the large and ever-growing body of Assistant Medical Officers. Nowadays a good deal is expected of representatives; they are generally expected to give some account of their stewardship, and it occurred to us that we might make an effort to do something for our constituents by calling the attention of this Association to the status of Assistant Medical Officers in our specialty. We threw ourselves into the work the more readily because we felt strongly, and knew that we were supported in this feeling by not a few liberal-minded Superintendents, that Assistant Medical Officers, as a class, are not as well treated as they ought to be; that in many cases, indeed, considering their duties and responsibilities and the number of years they have devoted to the study of asylum work, they are neither accorded that consideration they deserve, nor are they adequately remunerated.

The inquiry into this matter, of which this paper is the fruit,

* Paper read at the Quarterly Meeting of the Medico-Psychological Association, November, 1889.

has been the associated work of three of the four Assistants on the Council of 1888 and 1889. The fourth, Dr. Wiglesworth, unfortunately for us, fortunately for himself, was snatched from our ranks and sent up higher before our enterprise was set going. Yet we would look for good to arise even from this misfortune, for although it shows the uncertain nature of the sufferings of the Assistant Medical Officer, it also brings back the old sometimes forgotten fact that Medical Superintendents and Assistant Medical Officers are bone of one bone and flesh of one flesh, so that in lending us their great influence in this matter the Superintendents are but aiding their younger brothers and heirs, who, like dutiful relatives, most patiently await the falling in of their estate, merely reminding their seniors that they must live in the meantime.

Unwilling to open this question without having the facts clearly before us, we issued circulars to all the public asylums in England, Wales, and Scotland, asking for information as to the number of patients and assistant medical officers in each asylum, together with each assistant's term of service, salary, stated increase (if any) in such salary, and at the same time inviting observation and remark on any other points which might aid us in the work. The large number of answers received is sufficient evidence of the deep interest taken in the question, and we only regret our inability to bring before the Association all the useful hints and suggestions offered us.

The facts thus obtained have been arranged in the form of a table, which we have had printed for the use of members at this meeting. Now what does this table bring out? Let us first take the case of junior assistant medical officers. These are in great part birds of passage, who take an asylum appointment merely to gain very useful experience, or in order to spend the time necessary to acquire that grave and senior look deemed essential in the private practitioner. They use their asylum appointment as others do resident hospital and infirmary appointments. They have from the first no intention of remaining in the specialty, and after a brief experience betake themselves to other and more attractive fields. These juniors receive from £80 to £120 or more per annum, with the usual allowances, and so are fairly paid. So far as we have heard, there is neither complaint nor ground for complaint here.

And now as to the seniors. How different is it with them! Here we have men who have given up five, seven, ten or more years to a special work, and are as gravely committed to a distinct and special line in life as a professional man well can

be. While they were juniors, while they made use of the asylum work merely for their own purpose, there was no room for complaint, but when they have been led, by love of, and interest in their work, to devote year after year of their lives to that work, they are on quite another footing, and in all fairness deserve to be recognized as men who have entered upon their life's work, and have already gained special knowledge therein. They are men who are doing work which could not be equally well done by any qualified man whatever, taken at random from the junior ranks of our profession, and they should, consequently, be rewarded in view of that special knowledge.

Now, is this done? Let us again refer to our table and see what an analysis brings out. (Our table is not yet complete, but we have no reason to think that if it were, the averages we have taken would be materially altered. Our figures are taken from a field sufficiently wide to justify us in basing arguments thereon.)

First, then, we learn that the average length of service of the present senior assistant medical officers in asylums is a little over six years, and that the average salary is £161, with allowances; which latter may by a liberal estimate be reckoned as worth £100 per annum, thus making the assistant's salary £261 per annum, after six years' service.

Now there is one point we would wish to impress upon the minds of superintendents and committees, who have the fixing of the salaries of assistant medical officers, and that is that lunacy should be looked upon as a special medical service which incapacitates a man for general practice as surely and as rapidly as either the army or navy; and that a man who has devoted five or ten years of his life to asylum work is as seriously committed to his own special line as the army or naval surgeon. No one, we imagine, will deny this, and therefore we consider ourselves justified in comparing assistant medical officers with army and naval surgeons of equal standing. And if we compare the average salary of our senior assistant medical officers, after six years' service, with the pay of either an army or naval surgeon of equal length of service, we shall discover the Government official has much the best of it.

There are, however, amongst the senior assistant medical officers in our table a considerable number whose experience is limited, whose salaries are small, and who may in consequence be looked upon as men not yet committed to the specialty. Lest it should be thought that these seriously affected our

figures, we shall in comparing the services confine our attention to assistants who have had at least five years' service already; that is to men who may be looked upon as wedded to the specialty. In our table we have particulars of 34 such men—men whose period of service varies from five to 21 years, and these we may take in five classes thus:—

	Men.	Years Service.	Salary.	Allowance.	Gratuity.	Pension.
Lunacy.	9	5	£164	Say £100	None.	None.
	9	6	147	„	„	„
	3	7	175	„	„	„
	3	8	150	„	„	„
	10	13	212	„	„	„
	34	8	173	„	„	„
Army.		5	250	„	—	Time counting.
		10	274	120	£1,000	„
		20			—	£1 a day for life.
Navy.		8	282	?	£1,000	Time counting.
		12	383	„	1,500	„
		20	492	„	—	£1 a day for life.

Nine men, with five or more years' service, have an average salary of £164. Nine more, with six years' service, have an average of £147. Three, with seven years' service, have an average of £175. Three others, with eight years' service, average £150; and 10 men, who average a service of 13 years, have an average salary of £212 per annum, making a total of 34 men with an average service of eight years, whose average salary is only £173, or with £100 added for allowances, £273 on eight years' service. And it must be remembered that these men have neither earned nor travelled in the way of earning either pension or gratuity.

Now let us turn to the army. Here a surgeon, after five years' service, gets (including allowances) £350 per annum, against the assistant medical officer of equal standing, £264; while at the same time every year is counting toward pension

or gratuity. After 10 years' service the army surgeon has £374 per annum; and if he then choose to retire can claim a gratuity of £1,000. Of course a portion of this time is spent in India; but during the time spent there the surgeon receives about one-third more both in pay and allowances.

And if we turn to the navy, very much the same condition of things is found to obtain. Here the surgeon, on eight years' service, gets £282 and allowances, and at the end of his eight years is entitled to a gratuity of £1,000 if he leave the service. If he serve 12 years, his pay being £383 and allowances, he is then entitled to a gratuity of £1,500; while if he be tenacious of life and serve 20 years on full pay—as some of our senior assistants have done—he is paid at the rate of £492 per annum, with allowances added, and can then claim a pension for life of £1 per day. Again, if a surgeon in either army or navy lose an eye or a limb he is pensioned, and if he die in active service, not only is his widow pensioned, but his children also receive pensions until they attain an age when they are supposed to be capable of supporting themselves. Not a few asylum medical assistants have been maimed—if we may use the word—in the service; have been compelled to retire broken in health and spirit; but has anyone ever heard of a pension being granted in such a case? The only case we have ever heard of, in which an assistant medical officer received a pension, was where he had attained the very respectable age of 50, and then had a new superintendent elected over his head. On the other hand, we have quite recently heard of an assistant of 17 years' service having to waive his claim to pension before his election to the superintendency of the asylum where he had spent the best part of his life, which goes to verify, if verification were wanted, the fact that the assistant medical officer does not benefit in any way, save in what salary he receives.

And now we think we have said enough to make it clear that lunacy is, and should be, looked upon as a special medical service, and that the Assistant Medical Officers are not going too far in asking for something like the remuneration of officers in the other public medical services.

Then comes the question: What would we suggest? for having diagnosed a disordered state of the system it becomes our duty to suggest a remedy.

Well, first, we would ask this Association to express a very strong opinion on the inadvisability of enlarging any more of our asylums beyond reasonable limits, as has unfortunately been

the custom of late when more asylum accommodation has been required in a county. It is now, we imagine, generally accepted that no asylum should contain more than 500 or at most 750 beds; that is asylums for the reception and treatment of acute and curable cases—asylums which are supposed to act as hospitals for the curable as well as asylums for the hopelessly insane. Institutions having a greater number of beds, say 1,000 to 2,000, become unwieldy concerns, and lose in one way as much, if not more, than is gained in another even to the ratepayer, not to mention that far greater loss which may be experienced by others.

Next we would venture the statement, and ask the Association to support us therein, that the medical staff in most, if not in all, our large asylums is not sufficiently strong. In all large asylums the senior Assistant Medical Officers have practically, to a large extent, the direction of the medical treatment of the patients, for it is impossible that the Superintendent of an asylum containing 800 to 2,000 patients, and having a staff of 150 to 300 individuals, can manage that huge establishment, and at the same time give attention and thought to every symptom, mental and bodily, appearing in those under his care. And this being admitted, we would argue that the senior Assistant Medical Officers deserve a higher standing in the specialty than is at present accorded them. And as it would be for the benefit of the insane, and the asylum system, and medical science itself, that such seniors should be retained in the service, efforts should be made to improve their position and so retain them.

This would be done by reducing their present load of routine clerical work, which we need not specify, by giving them more time for scientific study, by increasing their salaries on something like the army scale, and by making arrangements so that those who wished it might get married. If these things were done, even on a reasonably liberal scale, there cannot be a doubt that we should before long have men who would prefer the bedside and the study to the Superintendent's office with its thousand everyday worries, and who would be content to give up their whole lives to the study of mental and other nervous diseases. The recognition of such seniors as responsible physicians would undoubtedly do away with the pious fraud at present perpetrated on the public, viz., that the Superintendent is in all cases the physician who marks the symptoms in the sick in body and mind and treats those symptoms as they appear. But surely the Superintendent

would survive this. His position as Superintendent should be sufficiently sound to maintain him captain of the ship, notwithstanding the fact that his chief lieutenant is known to do a special duty on board, and to do that duty well. Three years ago, our then worthy President, Dr. Savage, when speaking of the want of medical spirit in asylums, said :—" He feared the want of progress was often due to the jealousy of Superintendents." His advice on that occasion was that "they should get the best assistants they could, and encourage them to publish all they could. He did not think a Superintendent should mind his assistant having better and later medical knowledge than he had himself. He should use his assistants as his right hands, for as Superintendent he had too much administration to do original work himself." But this is delicate ground, on which we will not venture further than to say that, like Dr. Savage, we see no reason why it should be necessary for the Superintendent, in order to maintain his position as Superintendent, to lay claim to the personal performance of the physician's work any more than that of the clerk or the engineer. He is appointed to superintend the whole establishment, and all that reflects credit on the institution, or upon any member of its staff as such, must reflect credit upon him. If Superintendents would recognize this fact jealousy would be cast out as an evil spirit, and even a President dare not breathe its name.

Finally, we are sanguine enough to think that all which we have proposed might be done if Superintendents would take the matter up intending to win. At present the air is full of the necessity for reform of some kind in asylum treatment of the curable insane, and before long more individual attention must be given to such cases. The appointment of junior assistants in greater number and of clinical clerks in all asylums would at once relieve the senior assistants of the millstone of clerical work, which at present hangs about their necks, enable them to learn more of each patient than is at present possible, and give them some time for study and research. Besides, this system of a moving population of young medical men in asylums would be of immense advantage to the profession generally. And we are pleased to think that if Committees of Visitors had all the facts of the case laid before them, and their importance urged by Superintendents and by this Association, they would readily accede to the demand for reasonable salaries to their senior assistants, together with accommodation such as would suit married men.

Superintendents need not fear making the office too desirable. The life of the Assistant Medical Officer, like that of the policeman in the ballad, is not a happy one. Already the duties and responsibilities attached to the office are arduous and heavy, and his public recognition as a responsible physician would not lighten his load. Some persons believing that there is too much of the vicar and curate about the present arrangement, have criticized us for not contrasting the fat salaries of the Superintendents with the lean ones of the assistants, but we decline to undertake so invidious a task. Our position is not that our superior officers are too highly paid—the reverse is often the case—but that assistants as a class are underpaid, and the remedy we propose is to level up a little. Again, on the other side, some have said, “Certainly, my dear fellow, your salary is not what it might be just at present, but remember you are only waiting for a superintendency.” This was all very well when the Assistant Medical Officers were few and superintendencies ripened in four or five years, but it loses all its sweet reasonableness when we have to wait ten, twelve, or more years for the golden fruit, and even run the risk of its being plucked by some outsider from over the wall just as we thought it about to drop.

And now to sum up our points, they are these:—

1. That it is in opposition to the best interests of the insane and of mental science that more of our asylums should be enlarged beyond, say, 700 to 800 beds.

2. That the medical staffs of asylums generally require strengthening by the appointment of junior assistants and clinical clerks.

3. That the senior Assistant Medical Officer should be given a recognized position as responsible physician under the Superintendent.

4. That arrangements should be made in all large asylums whereby the senior assistant need not remain a single man unless he choose.

5. That the salary of the senior assistant should increase with length of service on something like the scale at present in force in the army, instead of remaining for ever fixed, as is at present too frequently the case.

*Notes on Some Asylum Specialities.** By ROBERT BAKER, M.D., Medical Superintendent of the Retreat, York.

During the past twenty years I have visited many asylums in Great Britain and the Continent, in Canada and the United States. I believe I have never visited any asylum without learning something, though in a very few cases I may, perhaps, have only learned what to avoid.

Each asylum or hospital has almost necessarily its own original and special details in structural construction. I have thought that it might add to the interest of our quarterly meetings if those of us who have (or think that we have) made improvements in even small points of detail, would describe these, and when possible exhibit models.

I propose, therefore, this afternoon to exhibit to you the following specialities at present in use at the York Retreat:—

A. *An improved glass-lined odourless urinal.*—This urinal is erected in a projecting lavatory block, with cross ventilation, in the passage between the block and the main building. The model exhibited is made two inches to the foot, that is, it is exactly one-sixth the real size. The chamber is three feet six inches square, and the glass lining four feet six inches high. The walls are plastered behind the glass, and proper wood grounds are fixed to receive the glass fittings at the top and bottom. The floor is laid with a fall of $\frac{3}{4}$ in. to the furthest end from the door, and a gutter about 3 in. wide is formed along the two sides and at the end, having an additional slope of $1\frac{1}{4}$ in. The floor is covered with 8 lb. lead, dressed into the gutters and turning up by the wall sides, 5 in. A copper grate with lead trap is let into the lowest point of the gutter. The three sides of the urinal are lined with $\frac{1}{2}$ in. plate-glass; the obscured side of the plate-glass being turned to the wall. The edges of the glass are ground at the bottom, and at the joinings the upright angles of the glass are secured with copper angle strips, the glass being bedded in litharge. The glass is suspended at the bottom with strong copper clips, hanging in front of the lead work, so that the water drips off the glass clean into the gutter. All round the top of the glass a 1 in. copper sparge-pipe is fixed, through which the water for cleansing purposes is spread over the whole surface of the glass. A six-gallon flushing tank is fixed about eight feet high, having $1\frac{1}{4}$ in. supply, connected with the sparge-pipe. A tap is fixed in the supply pipe to the flushing tank,

* Paper read at the Quarterly Meeting of the Association, Nov. 6, 1889.

so that the water supply can be regulated to give a discharge as frequently as desired. The discharge from the urinal gutter should pass direct through the wall on to an open grate. The cost of this urinal is £18.

B. *Turkish bath tiling*.—These blocks are the chippings of marble, run into concrete, are made $8\frac{3}{4}$ in. square, and they make excellent marble mosaic floors, which even when wet are not slippery. The bath floorings are constructed of alternate squares of the lighter and darker colours laid diagonally in cement on a concrete bed. The cost of this tiling laid complete is 20s. per yard, not including the concrete bed. A fluted tile for bath floors is also useful in a shampooing room. These tiles, measuring $6\frac{3}{4}$ in. square, are laid with the flutes, alternating in direction diagonally, on the bed of concrete. Both these descriptions of tiles can be obtained from M. Ludvig Oppenheimer, Manchester.

C. *Self-locking fire guard*.—Occasionally it is desirable for safety's sake to have a fireplace protected with a locked guard. Visible padlocks, however, are objectionable and unsightly. In the accompanying model a spring lock is connected with the fire guard, and when it has to be removed the attendant has only to apply the key. The usual size is 2ft. 2in. in width by 2ft. 7in. in height. The cost in brass wire is £2, and the cost in iron 34s. They are made by Mr. Severs, Fishergate, York.

D. *An improved inspection plate*.—The accompanying model of an inspection plate for asylum doors is merely a neat adaptation of what is technically called the "hit and miss" principle, the surface of the plate nearest the patient's room being fitted with half-inch plate glass. The cost of each is 3s.

E. *Boots for chairs*.—In most of the American asylums they prevent the noise caused by restless patients moving their chairs on a slippery floor by placing each leg of the chair in a small india-rubber boot. Each boot contains half-an-ounce of india-rubber, and the cost is, therefore, about 2d. each. They can be purchased at this price of Messrs. Raper and Pullegn, York.

I feel that I ought almost to apologise for occupying so much of the valuable time of this learned Association with these particulars, but I am of opinion that the comfort and orderly working of an asylum can be largely increased by personal attention to small points of detail. I have only further to add that any of these exhibits are entirely at the service of any member of our Association.

Melancholia, from the Physiological and Evolutionary Points of View. By GEORGE M. ROBERTSON, M.B., Senior Assistant Physician, Royal Asylum, Morningside, Edinburgh.

I.

Probably no form of insanity includes so many varieties, or is characterized by so peculiar and even contradictory symptoms as melancholia. Under this form of mental derangement most authors include a variety they term excited or active melancholia which is characterized by a motor excitement, sometimes equalling that of acute mania, and they also include another variety termed melancholia with stupor, in which the patient remains absolutely motionless and quiet. Two more strikingly different varieties of insanity it would be impossible to describe, and we are at once confronted by the question — What explanation is there of the existence of these symptoms in melancholia?

In answering this question, we must know that we are investigating a function of an organ which has become diseased; the function being the production of depressed or painful emotion, and the diseased organ being the brain. Disease of any organ usually affects the performance of its functions, and before one can recognize the alterations of function produced by disease, it is necessary in the first place to understand the normal functions as they exist in a healthy organ. It is therefore necessary to study the production of depressed or painful emotion in a healthy brain, in order to elucidate the alterations we observe in the performance of this function in a diseased brain.

Before proceeding to study this function of the brain in health and disease, I must mention two or three general principles which must guide us, and the truth of which I have assumed.

In the first place, we must understand the difference between health and disease. Prof. Hamilton * defines health as “that condition of structure and function which . . . we find to be commonest,” and disease as “any departure from the normal (or healthy) standard of structure or function. . . .”

As we are not considering the alterations of structure that take place in melancholia, but merely the alterations of function, the first part of each definition does not concern us.

* “Textbook of Pathology,” p. 161.

Health and disease are thus relative terms, and there is no sharp line dividing the two.

As a corollary to this definition of disease I assume that the symptoms of disease are the normal functions modified.* To explain this more fully, I mean that the symptoms we perceive in disease all originate in some healthy function, and that disease superadds nothing new to the existing functions of the body. The departure from the normal intensifies, diminishes, abolishes, or perverts the function, and this departure from the normal standard we call a symptom of disease. We will subsequently find that most of the symptoms of melancholia can be traced to some normal function.

In the second place I assume the correctness of Darwin's "Theory of Evolution," and secondary to this the "Theory of Reversion" to a lower type. Darwin has conclusively shown that many of the expressions of the emotions in man are modifications of similar expressions in the lower animals.† If, then, reversion to an older and lower type sometimes takes place ‡ we have grounds for assuming that when disease affects the production of depressed or painful emotion, the expression of this emotion may sometimes acquire a closer resemblance to the expression of the same emotion in the lower animals.

A light appears to be thrown on some of the symptoms of melancholia by this assumption.

On analyzing depressed or painful emotion in health we find that it consists of at least three important elements.§ There is—

1. The characteristic feeling of depression or pain;
2. The train of ideas connected with this feeling; and
3. The special relationship to the different bodily organs, and especially the muscular system.

1. In the emotion we are considering there always exists a painful or disagreeable feeling. The intensity of this feeling, however, admits of various degrees, it may be slight or it may be intense, and distinctive names have been given to the various graduations which range from feelings of slight uneasiness or unhappiness to those of fright and of the most abject terror. That disease of the brain we term melancholia affects the production of depressed or painful emotion, and consequently it may affect the production of any of these graduated

* Gairdner, "The Physician as Naturalist," p. 259.

† Darwin, "Expression of the Emotions."

‡ Darwin, "Descent of Man," p. 137; and Maudsley, "Body and Mind," p. 47.

§ Ladd's "Elements of Physiological Psychology," p. 516.

states of depression. Remembering the corollary to our first assumption, this may be expressed in other words—that the symptoms of melancholia are modifications of the functions which produce any of the emotional states of pain or depression. It is most important to remember this fact, that a symptom of melancholia may be traced to any of the states of depressed emotion for its origin.

2. The second element in the constitution of an emotion is the change in the current of ideas. In depressed emotion there is a sudden interruption to the normal flow of ideas, and ideas are stimulated which are all of a gloomy or disagreeable nature. Owing to this fact, judgment is impaired, and if the sudden interruption to the flow of ideas be great, temporary confusion may result.

3. The most wonderful and characteristic accompaniments of the emotions, however, are the changes in the bodily organs, including the muscular system. These organic changes are not merely the expression or effect of the emotion, they are its “material cause and support,” and experimentally this receives confirmation from observations in hypnotism. If a hypnotized person is made to assume the facial expression and other motor accompaniments of fright, that emotional state is at once produced,* and so also to a lesser extent this occurs in acting.† At all events, these organic changes are recognized to be a most important element of the emotion,‡ and from the evolutionary point of view, they come before the ideational changes, as many of the invertebratæ show the organic changes accompanying fear, though they cannot possibly have many ideas.§ The organic changes in states of painful or depressed emotion extend over a wide range and involve the voluntary muscles, whereby their tone is increased or diminished, the involuntary muscles like the heart and intestinal muscles, the vaso-motor system producing paleness or flushing, the respiratory system, secreting glands, etc. Some of these particular changes will be subsequently investigated.

II.

After these preliminary remarks we will now take up a consideration of depressed or painful emotion in disease. As melancholia is such an extensive disease and embraces so many

* Hack Tuke, “Influence of Mind on the Body,” 2nd Edit., Vol. i., p. 228.

† Archer, “The Psychology of Acting.”

‡ Prof. James, “Mind,” 1884, ix., p. 188.

§ Romanes’ “Mental Evolution in Animals,” p. 342.

diverse forms, one must adopt a classification in describing it, and the best classification is a simple and physiological one. As this emotion has been found to consist of three important elements, any of these may serve as a basis for classifying the different varieties.

There are, firstly, the different degrees of intensity of the depressed or painful feeling, which might be ranged in regular order, but as this feeling is entirely subjective it cannot be conveniently adopted as a basis of classification. There are, secondly, the degrees of disturbance of the ideas, but there are practical difficulties in using this for a basis, as the degrees of disturbance are subtle and difficult to test. There are, thirdly, however, the organic changes, and of these especially the motor changes, which may form a basis of classification. These changes are readily observed, and can be accurately estimated, and though they do not exactly correspond with the degree of change in the ideas or feelings connected with the emotion, they do so roughly.

Taking the changes in the muscular system as a basis, the varieties of melancholia may be divided into the following three great sub-divisions* :—

I. Passive melancholia, in which there is an absence of tone in all the muscles ;

II. Active melancholia, in which there is excitement and increased tension of the muscles ;

III. Melancholia with stupor, in which the muscles do not respond to stimuli.

Passive melancholia.—I will now commence a consideration of passive melancholia by first giving a description of the healthy emotional condition, from which its symptoms may be traced. The condition I describe may be imagined to occur in a sane man after some heavy loss, such as the death of a near relative, and it may be called sorrow, despondency, gloom, or misery. It is not to be taken as the accurate description of a real case, yet all the symptoms are true ; all the symptoms may never have been seen in one case, but still the description is a correct one, in the same way as a composite photograph is.

An individual in this state is a picture of inaction and want of energy. He usually sits languidly in a chair with all his muscles relaxed. The eyelids droop, the angles of the mouth fall, and the face lengthens owing to relaxation of the jaw.† The head lies on the chest, the back is bent, and the hands fall

* Savage, "Insanity," Chap. vii., p. 151.

† Darwin, "Expression of the Emotions," p. 178.

listlessly by his sides or lie semi-closed in his lap. Even the respiration is slowed, and the voice is monotonous and low.

His sensations afford him no pleasure; pictures, music, food and drink, and physical exercise do not give him pleasure. Even his organic sensations are unpleasant, and he has lost his appetite. He does not sleep, and there is also a distinct feeling of bodily illbeing.

He is inobservant, and takes little interest in his surroundings. He dresses untidily, and he neglects his daily work. He cannot be bothered with questions, because thinking is unpleasant, and he cannot carry on a conversation. He lays undue stress on the gloomy side of all things. His mind continually dwells on one subject—the cause of his sorrow—and he cannot forget it. He feels so miserable that he often wishes he were dead, and he may occasionally think of committing suicide to end his sorrow.

This condition is only temporary, and he gradually comes round to the normal.

It has been pointed out that there is no boundary line between health and disease, and this condition, which I have described as occurring in health, often becomes one of disease. It is an exact description of a variety of insanity termed (*a*) Simple Melancholia by many authors, who recognize this condition as one of disease when it is produced by a totally inadequate cause, or when its duration is excessive.

The Rubicon of insanity is, however, crossed when once the judgment—that is the ideational element of the emotion—becomes much impaired, and the symptoms then differ markedly from the normal. This divergence from the normal is not, however, regular all along the lines, but in different cases is more marked in different directions. The special divergence from the normal marks that case out as a distinct variety, and hence we have the clinical * varieties of Passive Melancholia.

Thus we saw that the man suffering from deep sorrow could not carry on a conversation, could not think, and held biased opinions. If his ideation becomes more impaired he passes from holding false opinions to entertaining delusions, and if these refer to phenomena outside himself, we say he suffers from (*b*) Delusional Melancholia.

If coupled with this impaired judgment, the want of pleasure in his organic and other sensations, and the feeling of bodily ill-being become more marked, and if the delusions

* See Clouston, "Mental Diseases," Lecture II. and III.

are concerning his bodily health, we say he suffers from (c) Hypochondriacal Melancholia.

If one of the delusions concerning his bodily health be selected—it is usually an abdominal one—and if this be regarded as the cause of the depression, and the mind continually dwells on it, as in profound sorrow, it becomes a fixed delusion, and the variety of insanity is called (d) Visceral Melancholia.

If, instead of the wish that he were dead, and the occasional thoughts of suicide, there is a constant desire to commit suicide, whether founded on a delusion or in order to escape his intense misery, the variety is termed (e) Suicidal Melancholia.

We have thus described a variety of healthy depressed emotion; we have watched its passage into a diseased condition, and we have distinguished five clinical types of the diseased condition. In none of these five types has any new symptom been suddenly sprung upon us; all the symptoms are seen to be developments of phenomena which exist in health, from which their origin is obvious. As the disease progresses, all the symptoms deviate more from the normal phenomena; thus the want of appetite may form the basis of a delusion of poisoning, and there results a refusal to take food. All manner of eccentricities of conduct may also develop from delusions of various kinds.

Active melancholia.—I will now preface a consideration of the next sub-division, that of the Active Melancholia, in which the muscular system is characterized by tone and excitement, by a description of the healthy emotional states, from which its symptoms take origin.

In some cases of recent grief or acute anxiety the following phenomena may be observed:—The person is agitated and restless; the eyebrows are corrugated and the forehead is wrinkled; the hands are firmly closed or the individual is, as it is said, wringing his hands with grief. If he sits he keeps swaying his body, but he usually walks up and down the room. He is seldom silent, and usually continues repeating some phrase, such as, “What shall I do?” Mentally his condition is similar to that of profound sorrow, though his ideas are more vivid and excited, and he is more entirely absorbed in the subject of his grief, so that he does not observe sensations such as cold and hunger. As this condition is altogether a much more acute one than that of profound sorrow previously described, it lasts normally a shorter time.

The condition, however, of healthy, painful emotion, which is characterized by the greatest amount of muscular tone and excitement, is that of terror, and it is best seen in children.

The child gives a loud, high-pitched scream, and the breathing becomes agitated. The eyebrows are drawn up, and the eyes stare and protrude. The mouth is opened, and the facial muscles are tensely contracted. Even the hair may stand on end.

The general muscular tension is very great, and the child may run away. If caught by the object of its terror, it fights, struggles, and screams with extraordinary violence, till exhausted. The disturbance to the train of ideas is very great, and mental confusion and want of judgment prevail. It is useless to reason with the child; its ideas and actions are completely controlled by its emotion. Very similar conditions occur in the timid lower animals, such as birds or rabbits.

The condition of this emotion in disease may also be conveniently divided into two groups. In the first group the muscular excitement, though present, is not very great, and the ideational element of the emotion is often the most marked feature of the disease. We may thus have the same clinical varieties as exist in Passive Melancholia, but the symptoms are, as a rule, more acute. In the second group, however, as in terror, the motor excitement is the most marked feature of the disease, and completely overshadows the ideational changes. Dr. Clouston writes of this type, that "the patients rush about, are violent to those about them, wander ceaselessly, walking up and down like tigers in a cage, or roll about on the floor, or wring their hands, or shout, or groan, or moan, or weep loudly, or tear their clothes, or in their cries, attitudes and motions, express strongly their mental pain. In short, the muscular expression of the pervading emotion is strong and uncontrollable by volition."* They are most troublesome to manage, are very obstinate and resistive, and sometimes assault those about them. As a rule they are very confused and incoherent in their ideas.

Such are the symptoms of a typical example of Active Melancholia, and it will be noted that the chief symptoms—the motor excitement, the resistance, the violence, and the confusion—are developments of similar phenomena which are found in terror.

Melancholia with Stupor.—The third sub-division is that of Melancholia with Stupor, which from the motor point of view

* "Mental Diseases," 2nd Ed., p. 90.

may be defined as "more or less complete loss of reaction to stimuli."*

Melancholia with Stupor is divided into three varieties on account of three different conditions in which the voluntary motor system may be found.† It may be —

(1) Quite passive, unresistive, and having no tendency to keep fixed positions; or

(2) Resistive, in a condition of tension, showing more or less strong passive resistance, to external efforts to change the position; or

(3) Cataleptic, there being slight tension, little or no resistance, and a decided tendency to keep fixed attitudes and positions. The third condition is, to a great extent, intermediate between the other two.

1. A person suffering from the first variety of stupor has a vacuous expression of face. He sits or stands for hours where he is placed, and in the same attitude. When spoken to he takes no notice, and he shows no active desire or interest. His extremities are cold, and he does not obey the calls of Nature. In fact, the person is altogether a passive or negative quantity. He sees, hears, and feels nothing, he does nothing, he makes no resistance, and usually he seems to think of nothing. The emotional feeling and the state of the intelligence vary a good deal. In some cases there seems to be no feeling of depression, in others it is well marked; and in some there is no recollection of the state afterwards, which seems quite a blank, whilst in others there is a fair memory, and the existence of delusions is admitted.

This first variety of stupor corresponds with that state in health in which people say they are "paralyzed with fright," and they become powerless to move, even for self-preservation. It is commonly seen in the lower animals, as when a rabbit lies on its side and allows a weasel to approach it, and the so-called charm exercised by snakes over birds is believed by Sir Joseph Fayrer to be an example of it. In these instances intense fear usually exists, but we also have examples in which, along with the other phenomena of this emotional state, there is no conscious feeling of pain or fear. Dr. Livingstone has given an excellent description of how he felt no pain or fear, but was paralyzed when in the clutches of a lion. Two other instances are on record.‡

* Savage, "Insanity," p. 179.

† Clouston, "Mental Diseases," p. 289.

‡ Sir Lyon Playfair in "The Queen," Feb. 16, 1889 (quoted from the N.Y. "Forum").

2. In the second variety of stupor there is tone and passive rigidity in the voluntary muscles, and the individual resists efforts to alter the position of his limbs. This persistent passive resistance to all movements is very remarkable. In all other respects the case resembles the former variety, except there is, perhaps, a better peripheral circulation and a more melancholic expression. Etiologically it differs also in this respect, that whereas the former may occur after mania, stupor with resistance always occurs after melancholia.

The condition in health, from which this variety takes origin, is one which occurs in sudden terror, and is described in the popular expressions "frozen with terror" and "rigid with fright." Darwin* describes a case of stupefied amazement, together with terror, in an (Australian) native, who had never before seen a man on horseback. "He stood incapable of moving a limb, riveted to the spot, mouth open and eyes staring." He also remained motionless, and could not speak.

3. The third variety of stupor is that accompanied by catalepsy. Emotionally there is little depression felt during this condition, and the mind, as a rule, appears a blank after recovery. The cataleptic condition is too well known to need description. It appears to be a half-way stage between the two above varieties. The muscular tone is intermediate, resistance is slight, being what is described as "waxy," though it may be greater, and the limb continues remaining in the position it was placed.

The phenomenon in health, from which the cataleptic condition accompanying melancholia takes its origin, is, I think, that fixation of movement or gesture which occurs in surprise or astonished fright, surprise being regarded as a painful emotion.† The individual's attention has been suddenly seized, perhaps when doing something, and, while watching the object of his surprise, he becomes fixed and motionless for a variable number of seconds in one position, often an awkward and ludicrous one. The transition from this to melancholic catalepsy is bridged over, to some extent, by the cases of distinct temporary catalepsy which have been known to occur suddenly in fright. From the evolutionary point of view, also, a connection appears to be established between this state and the so-called "simulated death" of insects and other animals, which will be subsequently mentioned.

We have now concluded a brief description of all the chief

* "Expression of the Emotions," p. 280.

† G. H. Lewes, "Problems of Life and Mind," p. 385.

varieties of melancholia. The three broad types have been found to be very dissimilar from one another, but they nevertheless show their relationship by tending to pass into one another. Thus a case of passive melancholia may pass into active melancholia, and finally end in stupor. There are also connecting links between the three varieties. Thus in simple melancholia there is slowness of ideation and some degree of confusion, which may be regarded as the first stage of stupor; and cases of passive melancholia, and even of stupor, show their connection with active melancholia by becoming suddenly impulsive every now and then, which is a condition allied to that of excitement.

III.

We have so far studied melancholia from the physiological point of view, and I have attempted to show the gradual development of the symptoms of disease from the normal functions. We will now investigate melancholia more from the evolutionary point of view, in order to explain the primary origin of the symptoms. In doing this it will be most convenient to take up the individual symptoms and discuss them. The first symptom we will discuss is that of the increased tone of the muscles in active, and their relaxation in passive, melancholia.

The active and passive states.—In the evolution of the emotions, as of other functions, the finer and more complex are developed from the coarser and more simple.* Thus in the painful or depressed emotions such complex feelings as sorrow and anxiety must have come after fear, and it is to this primary feeling we must go in studying their origins. Hughlings Jackson has said† that anxiety “is only fright spread out thin;” he might have said with truth every form of depressed emotion was fright spread out thin. It is thus to fear or fright in unevolved man and the lower animals that we must go for a solution of the above problem, and on this, as on most questions of evolutionary origin, Darwin’s genius has shed light. He says that “men during numberless generations have endeavoured to escape from their enemies or danger by headlong flight, or by violently struggling with them. . . . As these exertions have often been prolonged to the last extremity, the final result will have been utter prostration, pallor, perspiration, trembling of all the muscles, or their complete relaxation.

* Herbert Spencer, “Principles of Sociology,” p. 53.

† “Lancet,” p. 338, Sept. 4, 1875, on “Softening of the Brain.”

And now, whenever the emotion of fear is strongly felt, though it may not lead to any exertion, the same results tend to reappear through the force of inheritance and association.”*

In the struggling, therefore, that takes place do we find the cause of the increased tone, and in the subsequent exhaustion we find the cause of the relaxed tone, according to Darwin’s “Law of Serviceable Associated Habits,”† which is assumed all through this part of the article. A confirmation of this fact is obtained in the forms of emotion that tone or relaxation accompany. In those emotions produced by anticipation of future misery there is increased tone and excitement; in those which dwell upon the past there is relaxation.‡ “If we expect to suffer we are anxious; if we have no hope of relief we despair.”§ In the one, by action and resistance, we may surmount the danger, hence there is increased tone; in the other the time for action is past, or action is useless, hence there is relaxation.

The analogies between active and passive melancholia on the one hand, and the struggling and exhaustion of a frightened animal or man on the other, are much closer than merely tone and relaxation of the muscles, and into this we will now enter with greater detail.

Resistance and obstinacy.—The tension of the muscles in active melancholia takes the form of resistance, and usually combined with it is the allied mental condition of obstinacy. Almost all melancholiacs are obstinate, some are dreadfully so, and it makes them very difficult to manage. The active varieties of melancholia, including resistive stupor, also show a perpetual resistance. They seem to resist on principle anything and everything that is done to them. There is in these cases a perpetual meaningless resistance, which can only be explained by the struggling animal theory.

Impulsiveness and violence.—Patients suffering from active melancholia are very commonly violent, and patients suffering from any kind of melancholia may become suddenly and impulsively violent. This tendency to strike their fellow patients

* Darwin, “Expression of the Emotions,” p. 308.

† *Ibid.* p. 28. “Certain complex actions are of direct or indirect service under certain states of the mind, in order to relieve or gratify certain sensations, desires, &c.; and whenever the same state of mind is induced, however feebly there is a tendency through the force of habit and association for the same movements to be performed, though they may not then be of the least use.”

‡ Bucknill and Tuke, “Psych. Med.,” 4th Ed., p. 449.

§ “Expression of the Emotions,” p. 178.

or attendants, especially if thwarted in any way, resembles very closely the actions of a struggling animal.

Homicide.—It is not surprising that a desire to kill should occur, and that there should be a distinct homicidal variety of melancholia, if the emotion be evolved from a condition in which one animal is doing its utmost to kill another.

As a symptom, homicide is not common, but it is just when a theory holds true, even with exceptions such as this, that it proves to be correct.

Restlessness and craving to be on their feet.—Many melancholiacs are restless, and most of them give the attendants much trouble to keep them in bed, or sitting. Almost all seem to have a craving to be on their feet, and while some simply stand, and others wander aimlessly, there are still others that have a perpetual impulse to run away. The greatest “bolters” in asylums are frequently melancholiacs. It may be that getting up and running away have so often brought relief from danger or from enemies, that in melancholia one naturally gets up either to be prepared to run or fight, or to obtain mitigation of the depressed emotion from previous associations of relief. Wild animals in menageries walk up and down their cages, like some excited melancholiacs. The desire to run is also experienced when panic seizes soldiers.

Groaning, repetition of phrases, and shouting.—Darwin states that when suffering severe pain groaning brings relief, by letting off energy, and after becoming a habit one groans reflexly, by association of painful states, in mental depression. Some excited melancholiacs shout and roar, and repeat phrases such as “Oh, dear me!” loudly and unceasingly. Some of these are the noisiest patients in asylums, and render both day and night hideous by their shouts. These symptoms have probably been derived from the scream of terror, which is common to man and the lower animals. The scream may have been derived from the groan, which brings relief to pain, but most probably it was primarily the terrified call for help, and used by the young of an animal when in danger to attract its parents, or by the member of a flock.

Staring eyes.—This is a symptom of active melancholia, especially if there be much excitement. The frightened animal opens its eyes widely that there may be no obstruction to vision in order to discover the enemy, or means of escape.

Selfishness.—Almost all melancholiacs are selfish, and think entirely of themselves. An animal struggling for existence in

a pre-eminent degree is looking after number one, and may be said to be selfish.

Destructiveness, cruelty, etc.—As an occasional symptom we observe in melancholiacs destructiveness; they spoil plants, tear clothes and leaves out of books, break articles of furniture or ornaments wantonly, and put things in the fire. They may also be wicked in many ways, being sometimes indecent, telling lies, and cruel. Such symptoms are totally inexplicable regarded from the point of view of physiological depressed emotion alone, but regarding the evolution of the emotion from the animal struggling for its life, bent on doing injury, and exercising no self-control, they become understood.

Coldness of the extremities and feeble circulation.—This occurs in passive melancholia and in stupor, and is derived by association of emotional condition from the muscular and cardiac exhaustion which succeeds a severe struggle for life.

Drooping of the eyelids and general languor.—This occurs in passive melancholia, and is derived from the collapse after a struggle.

Paralysis of the sphincters is also traced to the same origin.

Refusal to take food.—The origin of this has already been traced, but it is interesting to note that it is a common symptom in wild birds and other animals, when they are caged, and probably suffer some form of depressed emotion. Want of appetite plus resistance may produce persistent refusal to take food.

Suicide.—This symptom cannot be studied from the evolutionary point of view, in spite of the fact that some people believe in the suicide of scorpions.

Erection of the hair.—Bristling of the hair may occur to some extent in a small percentage of cases, but it is quite common to observe a downy appearance on the face owing to the fine hairs being erect. This has its origin in the erection of the hair or feathers of a frightened animal in order that it may appear larger and more dangerous to its assailant.

Secretions.—The urine is increased in amount and is rendered more watery under fear, and I have observed one case of diabetes incipidus in melancholia. In terror there is also an increased secretion of sweat, yet in melancholia I have observed no affection of this secretion.

Catalepsy.—This symptom is a very interesting one, and there being tone in the muscles it probably has the same origin in evolution as active melancholia. It is a comparatively rare symptom in melancholia, and it is not peculiar to

that form of insanity; yet there is a close connection between the two, and it may precede an attack or come on during one. Physiologically, I have said it is derived from the "fixation" of surprise, and this may account for its not being limited to melancholia, as surprise, though fundamentally a painful emotion,* is sometimes pleasurable.† This "fixation" in surprise, especially in the less acute degrees of the emotion, as in surprised attention, is one which has been overlooked, and I can find no mention of it in Darwin, Sir Charles Bell, Hack Tuke, or in Bain, and still it is a well-known experience. Have we not all seen our friends, for example, when eating and raising a spoon to the mouth being suddenly surprised at some occurrence, and while watching it have noticed them holding the spoon for a considerable time in a fixed position near the lips? In this fixation, I believe we have the physiological elements of catalepsy.

In some of the lower animals I believe this tendency has been highly developed by natural selection, having proved useful in certain circumstances, and it is the real explanation of the so-called simulation of death by insects and other animals.

Darwin‡ investigated this question of shamming death among insects, and after many observations found that in no one instance was the attitude similar to that of a dead insect of the same species, and in many instances it was very unlike. He came to the conclusion that the position was due to the "paralyzing effects of excessive fear." I think Darwin's observations prove that there is no conscious simulation of death, and I believe the condition to be entirely due to an exaggeration of the "fixation" in surprised fright. It occurs in most, if not all classes, of the animal kingdom according to Romanes§ and of the higher animals with us, it is probably best seen in mice, in which animal I have myself observed a distinctly cataleptic condition of the limbs. The theory that this condition is a cataleptic stupor produced by fright is believed by several eminent comparative psychologists.|| There is also a connection between this condition in the lower animals and catalepsy in melancholia in a number of

* Darwin, "Expression," p. 307.

† "Emotions and Will," Brain, p. 13. "Influence of the Mind upon the Body," Hack Tuke, Vol. i., p. 163, 2nd. ed.

‡ Darwin, Essay on Instinct in Romanes' "Mental Evolution in Animals," p. 365.

§ "Mental Evolution in Animals," p. 306.

|| Romanes, Prof. Preyer, Prof. P. W. Duncan, and Couch.

recorded cases of sudden catalepsy produced by fright,* and these instances may be regarded as bridging over the borderlands between health and disease. An analogous condition to fright rigidity and catalepsy is also probably experienced in nightmare, and I have met two instances of medical students who on awakening when under this peculiar condition of depressed emotion found themselves unable to move for nearly a minute.

At this time, when hypnotism is so much in vogue, it is interesting to note that Heidenhain writes, "that the hypnotic state is nothing more than an artificially produced catalepsy."†

In the foregoing remarks I have traced back the symptoms of disease to the functions of health, and carried both back to their origin in evolution, and by these means I have attempted to give a rational explanation of the symptoms of melancholia.

CLINICAL NOTES AND CASES.

Case of Chronic Meningitis. By J. W. PLAXTON, M.R.C.S.,
Medical Superintendent of the Lunatic Asylum, Kingston,
Jamaica.

Around pachymeningitis curiosity and interest have long circled: the pages of the "Journal of Mental Science" bear witness. Men felt that the current explanation of its development was inadequate, and, if they did not deny its truth, they received it with suspended contradiction rather than acquiescence.

Huguenin's explanation ("Ziemssen," Vol. xii., p. 306), that pachymeningitis, as we usually see it, is merely a case of new tenants in a deserted house, is one which must ultimately oust the older idea.

In support of the newer I put on record in the "Journal of Mental Science" for January, 1889, a case of "Shrinkage of a Hemisphere and subsequent Pachymeningitis." In that case a one-sided pachymeningitis existed, complementary to an equally circumscribed shrinkage of the cerebrum.

Huguenin's explanation will stand good for those cases of which hæmorrhage is the essential fact, and of which antecedent diminution of the natural contents of the skull is almost

* Hack Tuke, "Influence of Mind on the Body," p. 308.

† Heidenhain, "Hypnotism," p. 25.

essential. But the gist of the explanation is this, that we have not to do with a pachymeningitis in these cases at all; we have to deal with an organizing blood clot in the subdural space, nothing else. It is, therefore, high time we dropped such an inappropriate term as pachymeningitis in cases of the kind. Why should we retain a special term for an organizing clot in the subdural space any more than for one in a ligatured artery?

There are cases, of which I have one to narrate, of a true chronic meningitis, the outcome of which is such a thickening of the dura-mater as to render the term pachymeningitis appropriate, but this category has nothing in common with that of the usurping blood-clot—neither cause, course, nor resultant. In the pretender to this name the cause is, if I may say so, a *vis a fronte*, a *vacuano*, in the rightful heir injury, or some one or other of the more obscure causes of inflammation. In their course the two differ, as deposition by the avalanche (hæmatoma) differs from the orderly deposition of water; and the resultants are as conditional, a talus or a stratification.

W. B., male, aged about 40 years, had been a patient in the Jamaica Lunatic Asylum for two years, when he was discharged recovered on July 26, 1886. After an interval of 16 days he was readmitted August 12, 1886, in an acutely excited condition. The police reported that as early as the seventh day after his discharge his conduct had become irrational, and proclaimed mental elation and grandiose ideas. On the second of August he was arrested by the police, and detained two days in the lock-up. Whilst under detention he behaved well, said he did not know why he had behaved irrationally—"it must have been a joke." He was set at liberty with the consent of the medical attendant, and straightway behaved as before. He entered several houses, and conducted himself as though he had been the rightful owner. Re-arrested on the sixth, he could not explain his conduct, was merry and joyous, and at night was noisy and destructive, and so violent as to need the strait-jacket. He was lewd and lascivious, and stripped himself naked. He attempted a carnal assault on a female in the presence of others.

On admission, it is only necessary to remark that his bodily condition was indifferent; that his skin bore evidence of recent troubles, such as a recent cut of upper lip, abrasions, and, amongst others, one bruise on the left side of the forehead. Pulse rate noted as 60.

After admission, for about three weeks he continued more or less noisy and excited, and then seems to have settled down into the beaten ways of the place—at times quarrelsome and inclined to bravado, but working now with the bricklayer, now with the porter.

A legacy from my predecessor, I knew him for more than a year before he died. Big and burly in body, he had the aspect of an epileptic; dull and fatuous in the face, his mental operations were limited, and slow at the best. The occurrence of a fit about a year before his death seemed to set this matter at rest.

Six months later the power of co-ordination of the muscles of the lower limbs failed gradually, attained some severity, persisted for a time, and passed off.

He had a convulsion again six months before his death, and then on several (five) occasions during the last two months of his life. Finally, he had a series of thirty (during which he was unconscious), between the hours of 10 p.m. and 7.30 a.m., at which time he died, August 9, 1888, after a residence for the second time of two years.

Sectio cadaveris made August 9, 1888, $2\frac{1}{2}$ hours after death. Body that of a well-made man, fat, and without external markings. Rigor mortis present in arms and ankles, not in knees.

Head first examined. Scalp thick and congested; skull cap and whole bony walls of skull unmistakably thicker than natural, and very vascular; the general thickening in certain places ran into localized excesses of a coarsely porous bone, which overlay lesions of the subjacent membranes and brain.

The excesses were on the inner surfaces of the bones, and occurred:—1. On the inner surface of the left half of the frontal bone. 2. At the posterior inferior border of the right parietal bone, and the contiguous portion of the occipital. 3. In the right cerebellar fossa of the occipital bone. The outer surface of the dura mater, laid bare by taking away the skull cap, showed nothing noticeably amiss, but its inner surface at the spots corresponding to the porous patches of the bony walls without was adherent to the brain within (the membranes intermediating). It was greatly thickened at these places, but elsewhere was not abnormal-looking.

After slitting round the dura-mater with the probe-pointed bistoury, and exposing the dome of the cerebrum, the first thing to be seen was a partial view of a patch of the left frontal lobe, over which thickened arachnoid passed bladder-like; next, raising the frontal lobes, this patch resisted, being in a trifling degree adherent to the inner surface of the dura-mater. The extrication of the bed of the right hemisphere of the cerebrum was resisted in like manner, and came away, leaving behind cortex adherent to the walls over the area of a shilling. Finally, almost the whole of the right hemisphere of the cerebellum was found to be glued to the dura-mater of the right cerebellar fossa. The encephalon, therefore, was adherent to the walls of the skull at three several points, and, moreover, had suffered the extensive changes now to be described at those points.

α . In the left frontal lobe, in the second and third convolution anterior to Broca's convolution, brain, over an area of a crown

piece, had been replaced by a boggy and gelatinous, but not diffuent substitute, glazy in section. The change reached half-way from the surface to the anterior horn of the lateral ventricle. The gyrus in front of Broca's took part in the disease, but Broca's did not.

β. A patch of the superficial area of a shilling occupied a central position on the outer surface of the right occipital lobe. Although the cortex and subjacent medullary matter had undergone change here, it had not undergone removal and substitution, nor did the change penetrate deeply.

γ. In the cerebellum the convolutions of the posterior and outer surfaces of the right hemisphere were so altered as to have become hard and dense to the finger, and resistant to the knife. They had lost their characteristic colour, and showed boldly on the face of the section. Each leaflet looked shrivelled, and was distinct from its neighbour. The ground given up by its contraction had been yielded up to an intrusive gelatinous-looking tissue, which lay between the leaflets, forcing them apart, yet holding them together.

The pia-arachnoid, speaking generally, was but little, if any, thicker than natural, or manifestly diseased.

The cerebrum generally was plump and well convoluted.

The vessels were contracted, hence were small, but no degenerative or other changes were recognized.

The sum of the changes visible on simple inspection, shortly expressed, were, in addition to a general thickening of the bony walls of the skull, local disease of bone, meninges, and encephalon over contiguous, superseded areas.

Cerebrum from the frontal lobe and the cerebellum, with its thickened investiture, were hardened in Müller's fluid, and examined microscopically.

In a stained section from the cerebellum, mounted in balsam, profound alteration from the healthy condition was evident without the aid of the microscope. The dura-mater, arachnoid, and pia, taken as one, occupied $\frac{5}{32}$ of an inch of the margin of the section, of which dura-mater claimed $\frac{2}{32}$. The section, stained in carmine, had passed through healthy as well as diseased tissue, and the contrast between them at once struck the eye. An unaffected leaflet showed, first, a broad lightly-tinted zone, which was the cortex from the pia-mater covered surface inwards to the granular layer; then the granular layer, with its outer edge sharply defined from the cortex, and its inner border well marked, but less sharp, broad, and deeply stained; then, innermost of all, the medullary region faintly tinted.

As the affected tissue was neared, the granular layer narrowed, and was lost to the eye, and the whole section showed an almost uniform depth of coloration, the medullary region being indicated by a triflingly less depth of tint. The extreme outer edge was also

differentiated by comparative pallor (this is not unusual where chromates have been used for hardening), but not at all points. Occasionally the colouring deepened evenly from centre to edge.

Microscopic examination; power $\frac{14}{1}$. When examined with this low power the divergence from the normal state of things seen with the eye was confirmed. When attention was turned to the granular layer, as it passed progressively from the healthy to the affected regions, that layer was seen to narrow until but the faintest indications of its persistence remained. The loss was from the deeper layers, and the position of the trace to which it finally became reduced showed that the cortical layer had shrunken also to just one half its depth in the unaffected leaflet.

The membranes exhibited with this power ($\frac{14}{1}$) the external boundary of denser dura-mater; the sub-arachnoid region widely areolated, and the pericerebellar pia-mater thickened, and deeply coloured, because crowded with cells and blood-vessels; but there was no sharp line to be drawn between any two of them. At one or two points the pia-mater, with its cells, invaded the cortex itself, and was confused with it.

With higher powers of the microscope ($\frac{500}{1}$) the evidence of the naked eye and the lower powers was confirmed in detail. The lower strata of the meninges were seen choked with cells, and fusion of the pia and cortex, where such has taken place, were seen to have occurred along the track of entering blood-vessels.

Cortex and granular layer (minus granular) exhibited an almost even staining, and in excess of the medullary region. From the granular layer, the granules by which it is known had entirely disappeared. The gradual loss in the transitional region was seen more distinctly, and the only indication of the position it should occupy was the trace spoken of above as visible under the lower power. This trace was now seen to be a continuation from the granular layer of large nuclei, irregularly placed three, four, or five deep in a narrow band. They were for the most part oval, with the long axis almost always perpendicular to the surface of the convolutions; occasionally the outer end was obtusely pointed. They resembled most closely the nuclei of the muscle cells of the middle coat of one of the smaller arteries. They did not seem, however, to have any such relation, nor to have any cell territory of their own, nor do my preparations show that they possess processes.

No cells of Purkinje could be demonstrated in the altered cortex, but, on the other hand, they were few and difficult to demonstrate in the healthy parts. My failure in this may be due in a measure to the length of time the tissue had been soaking in Müller's fluid.

The cortex was diminished in breadth, and denser than in the normal parts of the sections.

The blood-vessels showed much more numerously; their sheaths

were wide, and the peri-vascular spaces full of cells—exactly resembling the cells which crowded the inmost layers of the pia, and the granules of the normal granular layer—leucocytes.

Thick plugs of cell-crowded pia-mater dipped down between convolutions.

A section made from the tissue, which in the frontal lobe of the cerebrum had taken the place of the vanished convolutions, showed a web of blood-vessels and capillaries, with the intervascular spaces bridged by fine fibrils in every direction; the fibrils being prolongations from single connective (neuroglia) tissue cells, which must have been bathed in fluid, for the whole tissue is a sponge, and section-making only possible after infiltration with paraffin. After solution of the paraffin, a loose filmy web was left, which it was impossible to mount with its parts in relation.

The connective tissue cells stain magnificently, as they always do when taken from the neighbourhood of a lesion of this kind, and it is here that I have always best seen the connection of the processes of such cells with the walls of capillaries.

The alterations which the microscope showed to have occurred may be enumerated as:

1. In the frontal lobe: Absence of cerebral matter beneath a wide area, and replacement by, or, perhaps, it would be more correct to say, its reduction to, a connective tissue, loose-meshed and vascular.

2. In the cerebellum: Condensation and contraction of the cortex, loss of the cells of Purkinje, obliteration of the granular layer, and a general increase of vascularity.

3. Thickening and fusion with each other of the dura mater, arachnoid, and pia mater, and, rarely, fusion of the pia with the cerebellar cortex. An orderly overgrowth; in fact, a chronic inflammation.

After such detail it remains to bring the rays of observation to the focus of explanation. The disease had two centres, and no more—the left frontal and the right occipital regions. At these centres, from without inwards, from the bony wall to the viscus, all the structures were implicated. Inspection and the microscope accounted for the disease in the walls as a chronic inflammation, a true meningitis; and, in the cerebellum, had no other explanation to offer. The cicatrix, which in the left frontal lobe had replaced so much of the brain matter, is not to be explained in the same manner; it was not caused by extension inwards of the inflammatory process, nor was it from this point that the disease set out. The first suggestion is negatived by the microscopic appearances, those of quiescence; the second by the fact that the membranes covering the cicatrix, although distinctly involved and adherent, were adherent

to a trifling extent only, and that the posterior region of disease was distinct from this.

It was at first difficult to ascribe to a single cause the meningeal and visceral lesion (cicatrix); but, after some thought, the conjecture which seems to best satisfy the given conditions is concussion, and to concussion, I believe, the beginning of the disease is to be attributed.

The cicatrix in the frontal lobe I interpret as marking the seat of maximum intensity of the injury, probably of hæmorrhage, and of the neurotic softening which followed (?).

As strengthening my supposition, the lesions occupy extremities of an axis of the skull, though on different sides of the brain. The man had been extremely violent before his second admission, and it is remarked that he had a bruise on the left forehead when admitted.

The man had been insane four years, and whilst insane these meningitic processes had been active within his cranium. It would be satisfactory if their interconnections could be made out, but with the best intention the foundations are much too slender for anything but a conjectural explanation. (Perhaps it is fortunate we have no history. In Jamaica mirage is almost as prevalent as in Tarascon.)

If the conjectured concussion could be carried back to a time antecedent to the insanity, no one need, I think, hesitate to connect the insanity with the accident and its consequences as cause and event; and I have already given reasons why the concussion should be carried back to the time of his second admission at least; but, further than this, there are certain additional facts which bring me to the belief that the conjectured injury did indeed precede his insanity, and cause it.

This extension of opinion is grounded on the age of the cicatrix in the frontal region of the cerebrum. The cicatrix was perfect, all necrotic products had been removed, and the activities of the adjoining cerebral tissues were quiescent. Again, the immediate recurrence of insanity on his return home from a life of indolent quietude to one of excitement and riot (there is evidence of this) suggests the fanning into flame of old fires.

If it may not be conceded that the psychic disturbance was from the first dependent on the lesions discovered after death, I submit that it is probable that the insanity of his second and final residence in the asylum was so. Firstly, for the reasons already given; secondly, for the reason that the characteristics of his condition were that his wits were dull and his sense

blunt, and that during the earlier months of his residence, especially at the time of his admission, he exhibited well-marked grandiose delirium, and other peculiarities which led to the suspicion of general paralysis, a disease in which cortical and meningeal changes have part. There is no need to take further note of the epilepsy and inco-ordination of muscles than to bear in mind that "congestive" attacks accompany general paralysis, and inco-ordinated movements indicate interference with the functions of the middle lobe of the cerebellum.

My opinion is that this man's case was one of concussion of the brain in the first instance, with, as an immediate result, a local destruction of nervous matter, and the kindling of a chronic meningitis, the mental disturbance being dependent and resulting.

I am here brought back to my starting point, that pachymeningitis is an unusual term, adopted for a condition which is now understood to be little more than the organization, almost abortive, of a sub-dural blood-clot. With such a condition my case has nothing in common but situation, but there is danger that the term will be applied to both.

I spoke incidentally at the outset of the case in which hæmatoma was the result of shrinking of a hemisphere; and to contrast that case with the one just related has been most interesting.

In that case the cerebral lesion was confined to the motor area—in this case the disease overran large areas of the cerebellum and cerebrum, but all outside the pale.

In both the objective symptoms were complementary; in one the disorganization was advertised in the striking capitals of crippled limbs and contracted muscles; in the other it lay enshrouded in the dim characters of clouded intelligence and in mistranslatable convulsion; a ray of light entering in with the transient disturbance of motor co-ordination.

Case of Insanity associated with Chorea in Advanced Life.

By N. M. MACFARLANE, M.B., Clinical Assistant Perth District Asylum, Murthly.

B. McD., domestic servant, æt. 64, was admitted into the Perth District Asylum on April 6th, 1888. Came from Perth Poorhouse, where she had been an inmate for two years. There was no family history to be got, and her personal history was meagre. Symptoms of insanity in the form of delusions of suspicion, hallucinations of

sight, and irritability showed themselves two months before admission into the poorhouse. The choreic symptoms began to develop two weeks later.

On admission, as regards her mental condition, she was maniacal, suicidal, and had delusions. Her memory was much impaired, and her sleep disturbed.

Physically she was of small stature, senile in appearance, reduced in condition, and in weak bodily health. Temperature, 98.4° ; pulse, 84, but so feeble as to be barely perceptible; cardiac sounds feeble and indistinct; respirations irregular; breathes in spasmodic jerks of varying depth; numerous rhonchi heard over chest; cough; teeth almost all gone; tongue furred; appetite capricious; bowels confined; constant choreic movements of tongue, lips, neck, and arms; pupils unequal.

After admission she was so feeble that she was confined to bed for about a month, but at the end of that time she had improved so far in general health as to be allowed to sit in the sick room. The choreic movements gradually increased in severity, and her physical condition on July 16th, 1889, was much the same in regard to external appearance and general condition as on admission. Her general bodily health, however, had somewhat improved.

She was markedly choreic, the muscles of the face, lips, tongue, neck, arms, and upper part of the trunk, being affected. The movements were constant, and consisted of the head being drawn back and rotated to one side, generally the left. At the same time the mouth opened, the lips twitched, and the eyes turned towards the same side as the head. Both forearms were flexed, and the limbs rotated outwards. The lower extremities were freer from choreic movements, and she could walk fairly well, although there was slight paresis of the right leg. Excitement always increased the severity of the movements, and when she spoke the facial and lingual movements became very inco-ordinate, and speech was spasmodic, the last word being uttered in a breathless manner. Sleep was disturbed, and the spasms were sometimes so severe as to throw her out of bed.

On July 21st she had a slight paralytic stroke of the right side, complicated by severe congestion of the lungs, from which she never recovered, but died on July 29th. The choreic movements got less intense after the paralysis, but they never altogether ceased till death.

A post-mortem examination was performed forty-two hours after death, and the following are among the points noted:—Scalp thin; calvarium hard and dense; dura mater adherent to one or two parts on either side of the longitudinal sinus, and firmly to the base. The membrane was thick and much congested, and when cut into about four ounces of serous fluid escaped. The longitudinal sinus had a firm clot in it two inches long. The arachnoid was in

a similar condition to the dura mater, and the pia mater was engorged with blood and much thickened. It was adherent to one or two points of the brain at the vertex, but at the base it was so adherent that it could not be stripped off without lacerating the brain substance. This was especially noticeable on the floor of the fourth ventricle. The pia mater of the cerebellum was likewise very adherent and more congested and thickened than any other part. Both large and small vessels were atheromatous. The brain was small, weighing $42\frac{1}{2}$ ounces, and the convolutions atrophied. It was soft in consistence, and readily lacerated by examination. The grey matter was reduced in depth, and there were many puncta on the cut surface. The lateral ventricles were distended to a slight extent, and their walls were lined by a layer of colloid-looking substance. There were two cysts, about the size of filberts, on the right choroid plexus.

The total encephalon weighed $44\frac{1}{2}$ ounces ; right hemisphere, 18 ounces ; left hemisphere, $18\frac{1}{2}$ ounces ; pons and medulla, one ounce ; cerebellum, five ounces.

Both lungs were much congested, and there were a few calcareous nodules in the apex of the left one. Heart small ; walls thin and friable ; no valvular lesion. A few calcareous scales were on the aortic cusps, and on the ascending part of the arch of the aorta. There was a large hæmorrhagic infarction of the spleen.

OCCASIONAL NOTES OF THE QUARTER.

Assistant Medical Officers.

We are glad that the last quarterly meeting of the Association was marked by the introduction of a paper on the status and prospects of the Assistant Medical Officers of Asylums for the Insane. This communication, contributed by three physicians holding office in asylums at the present time, will be found in the current number of the *Journal*, and will repay careful perusal. The fairness and moderation of the style in which it is written ought to commend it to our readers. That it was received by the meeting in an appreciative spirit will be evident to those who read the discussion, given in "Notes and News," which followed. It cannot be denied that there is much to discourage this class of medical officers, and to prevent, therefore, young physicians of high standing entering into this field of labour. To our certain knowledge there are

assistant medical officers in county asylums thoroughly interested in their work, and engaged in scientific observations, who are obliged against their will and tastes to contemplate resignation, and engaging in general practice. That they will carry with them a large amount of special knowledge eminently useful to them in their profession is very true. This, however, does not lessen the loss to the department of medicine in which they were likely to make fresh discoveries in the therapeutics and pathology of insanity. It would indicate a lamentable apathy on the part of men who perform their duties during many years for a salary the limits of which they have reached, and which, if the rules of the institution permitted, would not enable them to marry, if they did not speak out and combine for the purpose of improving the material condition of their class. The question for the Association to consider is whether it can promote the interests of assistant medical officers by any definite mode of action. We trust that the subject will be carefully considered by the members prior to the Spring meeting in Manchester, and that the meeting may then be in a position to pass some resolution calculated to secure the objects in view.

Proposed Hospital for the Insane of London.

At the usual weekly meeting of the London County Council, at the Guildhall, on November 5th, 1889, the Earl of Rosebery presiding, Mr. Brudenell Carter as Chairman of a Committee on a hospital for the insane, submitted the following report, which was agreed to by the Council:—

“Your Committee were instructed to inquire into, and to report to the Council upon, the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital with a visiting medical staff, for the study and curative treatment of insanity.

“Your Committee have now concluded their inquiries with regard to the question submitted to them.

“Your Committee have arrived at the conclusion that a hospital of the kind described would be likely materially to increase the present knowledge of the nature and causes of insanity, and therefore ultimately to increase the means avail-

able for its prevention and for its cure. They are consequently prepared to make the following recommendations :—

“(a) That an adequately equipped hospital, containing one hundred beds, for the study and curative treatment of insanity in pauper lunatics of both sexes, be established in the metropolis, and that it be under the direction and control of the Council.

“(b) That the ordinary medical staff of the hospital consist of a chief resident medical officer who has had asylum experience, of an assistant resident medical officer, of four visiting physicians, each of whom shall hold office as physician or assistant physician in a general hospital, and a pathologist. The members of this staff to perform such duties and to receive such stipends or honoraria as the Council may from time to time direct.

“(c) That, in addition to the ordinary medical staff, the following honorary medical officers be appointed, namely : A surgeon, an ophthalmic surgeon, an aural surgeon, a laryngologist, and a gynæcologist. Each of these honorary officers should hold, or should have held, similar office in a general hospital, and they should all be available as consultants whenever required by the physicians, or for the performance of operations which fall within their respective departments, when such operations are decided upon.”

The Committee concluded by requesting to be empowered to draw up a detailed report on the whole question.

Any endeavour to advance psychiatric medicine ought to be welcome, and we at once lay before our readers our opinion on the very important recommendation of the County Council of London.

If this new hospital succeed, there is no doubt that it will be followed by others in the larger centres in England, and therefore it is of the utmost importance that no false expectations should be raised, nor any unwise steps taken.

We do not think that enough men practically connected with the treatment of the insane were examined personally, and we should have liked to have seen or heard more of the sixty-five replies which were received from medical superintendents of asylums and others. We think that the members of the profession who were examined are only partly representative.

Before considering the recommendations, we would refer to

what we take to be the principles which started and carried out the investigation. First, insanity is said to be spreading almost unchecked by medical treatment, that little or no advance in the therapeutic treatment, the clinical investigation and the pathology of insanity has been made in England; and that of all the branches of medicine and surgery, this is the only one which lags behind.

We must ask ourselves if this is true, and next, if true, whether the proposal is the best way of meeting the want. We admit that psychiatry has not made as much progress as has surgery or some branches of medicine, but this surely depends chiefly on the nature of the malady which is concerned. The brain and its functions are not understood as are the kidney and its physiology, and consequently the pathology of the two must stand on different levels. Whether we are materialists or not, we must admit that the relationship of mind to brain is not cleared up, and that consciousness and its mysterious origin are not yet understood.

The asylum physician cannot be expected to make greater progress than the physiologist.

If mental medicine is behind, that is not necessarily the fault of the physician.

We fully admit that insanity does not all depend on disease of brain tissue; disorders of function may lead to change in tissue relationship, and possibly to disease; and those who act on the idea that every evidence of insanity means a related disease of brain, are on the wrong track.

If the asylum superintendent is not abreast of his medical brethren in medicine, is the plan suggested likely to bring him forward and to advance his science? We think it may, to some extent—partly directly, and partly indirectly. Increased knowledge of facts, increased power of observation, should lead to good results, and increased experience will, at least, teach some enthusiasts that there are lines along which attempts at advance are vain and wasteful efforts.

The Hospital is to be an institution where acute mental disorder is to be treated. We can understand the treatment of acute brain disease apart, and on the hospital plan, but the medical treatment of many cases of acute mental disorder on the same plan, will be dangerous and unsatisfactory. The present superintendent is often laughed at, looked upon as a superior farm-bailiff, having a decided turn for theatrical amusements, a kind of universal provider. Those who laugh, have not had a near view of the functions of such men, and

have not seen how many patients are yearly cured by general and not therapeutical means.

How is it that the general physician, who is so possessed by calm scientific knowledge that he can spare much of it for his asylum brother, is so fond of sending all his insane—nervous—patients away for change, and not treating them therapeutically, and we wonder if more is to be done by medicine for Hodge than for my Lord?

Let the experiment be tried, but with full recognition of its difficulties. Experience will teach the inexperienced—a clear gain.

The hospital must be in or near London, and we agree that 100 beds are enough to begin with; but we fear that the grounds necessary for the proper treatment of mental cases will not be obtained, Bethlem Hospital alone having anything approaching the ground required near London.

As to the staff, it is well that the chief resident medical officer should have some knowledge of insanity, for the provision for the visiting staff seems to exclude those who have practical knowledge, seeing that it is to consist of four men who are physicians or assistant physicians in a general hospital. The idea, we presume, is that no one who has a taint of the old principles should have anything to do with the new *régime*!

We conclude that if the County Council found it necessary to build an ophthalmic hospital, they would officer it with people who would treat the eyes on broad general principles. We maintain that the idea that every hospital physician knows what insanity is, is a delusion and a snare.

Let the visiting physicians be neither exclusively general, neurological, nor psychiatric; let each class be represented, and some good will follow.

We have criticised conscientiously, we hope not unkindly, the details of this well-meant plan, and have no doubt that if it is ever carried out, parts of it will be modified, for the objects of the hospital are not only to advance medical practice and clinical instruction, but also to cure the patients, and to fulfil these ends, they must be adapted by practical experience to well-defined ends.

First instance of the Operation of the new Lunacy Act.

We record with sincere, although not with unmixed satisfaction, the action of "*Toogood v. Wilkes*," in the Queen's Bench Division. The plaintiff, Mr. William Toogood, of Southampton, had brought an action against Mr. W. D. Wilkes, a medical practitioner of Salisbury, to recover damages for "injury to the plaintiff from the defendant's negligence, as a medical man, and for damages for injury to the plaintiff by reason of the defendant having negligently and wrongfully signed a certificate of the plaintiff's insanity, whereby he was detained in a lunatic asylum." The defendant's solicitor (Mr. George Smith), acting under the 12th section of the new Act (52 and 53 Vic., cap. 41, sec. 12*), issued a summons to show cause why the action should not be stayed. The summons, which was returnable on the 4th of November before one of the masters, was referred to Mr. Justice Field, before whom the case was argued on November 15 and 18. The judge decided that the onus lay upon the defendant (Wilkes) to satisfy him that there was not reasonable ground for alleging there was want of good faith or reasonable care. Counsel therefore opened the case on behalf of the defendant. Mr. Justice Field, in giving judgment, held that the defendant (Wilkes) had made out that there was no want of good faith or reasonable care on his part in giving his lunacy certificate. The action was therefore stayed.

Application was made for payment of Mr. Wilkes's costs, but the judge declined to give him them, unless the plaintiff appealed. This he has not done.

Although the result has been so far satisfactory, that what might have proved a tedious and expensive action has been cut short, it is to be regretted that defendant's costs were not allowed. To the lay mind, the justice of this decision is difficult to understand. However, the effect of the New Lunacy Act on this action brought against the signatory of a medical certificate can hardly fail to exert a beneficial influence upon litigious persons who have been discharged from asylums.

* "If any proceedings are taken against any person for signing, or carrying out, or doing any act with a view to sign or carry out any such order, report, or certificate, or presenting any such petition as in the last preceding subsection mentioned—*i.e.*, petition for a reception order—or doing anything in pursuance of this Act, such proceedings may, upon summary application to the High Court of Justice, or a judge thereof, be stayed upon such terms as to costs and otherwise as the court or judge may think fit, if the court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care."

Suicides in England and Wales.

The lamentable suicides with which the various papers have recently been filled induce us to resume the returns which four years ago we gave of the annual number of voluntary deaths in proportion to a given number of the population. We have brought up our Tables to the close of the year 1888.*

The reader will find: (1) The number of suicides at different ages in England and Wales during 28 years, 1861-1888, distinguishing the sexes. Returns are given also for groups of years as well as for each year since 1871. (2) The proportion of suicides to 1,000,000 living, at different ages, distinguishing the sexes.

Among the various results to which these Tables lead may be noted the following:—

Number. There are annually upwards of 2,200 persons who commit suicide in England and Wales, or about 80 per million persons living. The highest proportion reached in the course of a year during the 28 years has been 81 per million; the lowest, 61. There has been a fairly progressive increase from 65 in the first quinquennium to 78 in the last five years under review.

The following figures show at a glance the increase or decrease per cent. of suicides among equal numbers living at different ages during 1861-70 and 1881-8:—

Ages.		Persons.		Males.		Females.
All Ages.		15·2	...	19·2	...	8·8
15—	...	6·9	...	3·6	...	9·7
20—	...	15·9	...	8·5	...	25·8
25—	...	23·4	...	23·7	...	22·9
35—	...	24·5	...	25·0	...	20·8
45—	...	12·3	...	13·7	...	1·2
55—	...	11·5	...	14·9	...	5·7
65—	...	25·6	...	34·5	...	— 1·2
75 and upwards		28·2	...	47·8	...	—22·9

It will be seen that at all ages there is an increase, except in females at 65 and upwards.

* These figures have been carefully prepared by Mr. J. H. Shoveller, General Register Office, Somerset House.

Sex. Distinguishing the sexes it will be observed that the number of females who commit suicide is much less than that of males. We believe, however, that if the number of men and women who contemplate self-destruction—who, in short, are *suicidal*—could be ascertained, the disproportion would not be so great. Many more women than men desire or think they desire, but have not the courage to cause, their own death. This does not, however, admit of statistical verification. The Tables show that while from 1861 to 1888 (inclusive) 35,501 men committed suicide, only 12,203 women did so. During 1888, 1,732 men and 576 women destroyed themselves; this was the maximum number of females during our period of 28 years, the minimum number being 345 in 1863. Calculated on the million persons living, we see that in 1888 the ratio of male to female suicides was as 124 to 39, or during the whole period about 108 to 35. The proportion of female suicides between 15 and 20 was greater than among males at the same age, but between 20 and 25 the latter much preponderated, which is contrary to what Morselli lays down as the rule. The result as to the liability of the sexes may be summarized thus:—Among equal numbers living of both sexes there were almost exactly three male suicides to one female during 1861-88.

Age. We think the impressions many have as to the period of life most liable to suicide will differ from and be rectified by these figures. It will be seen that, of equal numbers living, the largest number of persons commit suicide during the decennium between 55 and 65, and that the proportion is only slightly less between 65 and 75. Nor would it have been supposed that the proportion at the age of 75 and upwards is greater than that between the ages of 35 and 45 in females, and 45 and 55 in males; among “Persons” it is not much below the proportion during the latter age-period; in fact, it was greater during the ten years 1871-1880, the ratio being 183 in old people, and 175 at the ages of 45-55. It was a trifle greater also during the five years 1881-1885.

Sex in relation to age. The tendency to suicide as age increases is the most striking in regard to males. Here the maximum liability is attained between 65 and 75. With women the highest proportion of suicides is between the ages 55-65, although the proportion between the ages 65-75 was once greater, viz., during the five years 1871-1875; but during the other periods this was not the case.

TABLE I.

Number of Suicides at Different Ages in England and Wales, 1861-1888.

Years.	PERSONS.										MALES.										FEMALES.							Years.													
	Under 15.					All Ages.					Under 15.					All Ages.					Under 15.					All Ages.					Under 15.					All Ages.					
	15-	20-	25-	35-	45-	55-	65-	75 and upwards.	15-	20-	25-	35-	45-	55-	65-	75 and upwards.	15-	20-	25-	35-	45-	55-	65-	75 and upwards.	15-	20-	25-		35-	45-	55-	65-	75 and upwards.								
1861-1888	1858	3887	6914	9000	10308	9576	5340	1560	35501	148	875	1797	4915	6735	7813	7669	4306	1243	12203	113	983	1090	1999	2265	2495	1907	1034	317	1861-1888												
1861-1870	14009	84	595	850	1957	2608	3167	2827	1489	432	10302	47	280	534	1383	1935	2367	2263	1175	318	3707	37	315	316	574	673	800	564	314	114	1861-1870										
1871-1880	16967	85	589	1037	2486	3123	3630	3485	1945	587	12652	46	286	661	1769	2357	2747	2771	1545	470	4315	39	303	376	717	766	883	714	400	117	1871-1880										
1861-1865	6715	39	290	414	902	1261	1549	1350	696	214	4933	20	135	255	650	942	1142	1077	551	161	1782	19	155	159	252	319	407	273	145	53	1861-1865										
1866-1870	7294	45	305	436	1055	1347	1618	1477	793	218	5369	27	145	279	733	993	1225	1186	624	157	1925	18	160	157	322	354	393	291	169	61	1866-1870										
1871-1875	7720	40	269	452	1119	1443	1606	1605	907	279	5715	24	132	288	799	1096	1197	1255	699	225	2005	16	137	164	320	347	409	350	208	54	1871-1875										
1876-1880	9247	45	320	585	1367	1680	2024	1880	1038	308	6937	22	154	373	970	1261	1550	1516	846	248	2310	23	166	212	397	419	474	364	192	63	1876-1880										
1881-1885	9932	55	393	581	1475	1943	2089	1949	1124	325	7446	33	175	351	1037	1471	1611	1558	937	273	2486	22	218	230	438	472	478	389	187	52	1881-1885										
1871	1495	7	56	78	225	291	328	302	155	53	1103	4	26	47	167	216	254	234	115	40	392	3	30	31	58	75	74	68	40	13	1871										
1872	1514	9	47	91	211	290	335	298	186	47	1095	6	24	57	138	221	246	232	135	36	419	3	23	34	73	69	89	66	51	11	1872										
1873	1518	8	53	88	216	287	311	317	180	58	1129	4	23	61	159	221	233	242	139	47	389	4	30	27	57	66	78	75	41	11	1873										
1874	1592	7	55	93	227	291	312	348	205	54	1204	3	32	64	167	223	226	279	166	44	388	4	23	29	60	68	86	69	39	10	1874										
1875	1601	9	58	102	240	284	320	340	181	67	1184	7	27	59	168	215	238	268	144	58	417	2	31	43	72	69	82	72	37	9	1875										
1876	1770	12	78	124	249	334	362	358	191	62	1312	4	40	78	187	249	257	286	156	55	458	8	38	46	62	85	105	72	35	7	1876										
1877	1699	6	52	110	260	302	365	333	211	60	1311	4	25	68	186	230	298	279	171	50	388	2	27	42	74	72	67	54	40	10	1877										
1878	1764	10	64	115	255	307	402	382	173	56	1299	5	32	74	177	229	303	298	137	44	465	5	32	41	78	78	99	84	36	12	1878										
1879	2035	14	62	121	315	385	450	390	225	73	1519	7	28	78	224	286	354	303	186	53	516	7	34	43	91	99	96	87	39	20	1879										
1880	1979	3	64	115	288	352	445	417	238	57	1496	2	29	75	196	267	338	350	196	43	483	1	35	40	92	85	107	67	42	14	1880										
1881	1955	12	86	101	294	371	429	384	216	62	1476	6	41	64	210	291	332	301	182	49	479	6	38	45	83	84	80	97	83	34	13	1881									
1882	1965	13	78	118	283	376	411	385	222	79	1446	7	40	72	200	273	307	308	177	62	519	6	38	46	83	103	104	77	45	17	1882										
1883	1962	6	88	119	286	430	388	389	205	51	1445	4	37	77	192	325	296	300	167	47	517	2	51	42	94	105	92	89	38	4	1883										
1884	2043	16	73	122	319	369	421	397	251	75	1550	12	30	68	227	284	315	332	214	68	493	4	43	54	92	85	106	65	37	7	1884										
1885	2007	8	68	121	293	397	440	392	230	58	1529	4	27	70	208	298	361	317	197	47	478	4	41	51	85	99	79	75	33	11	1885										
1886	2254	10	84	143	332	424	476	440	276	69	1694	5	42	89	245	310	365	347	231	60	560	5	42	54	87	114	111	93	45	9	1886										
1887	2234	14	101	135	333	442	462	435	236	76	1675	7	49	73	242	327	356	371	188	62	559	7	52	62	91	115	106	64	48	14	1887										
1888	2308	13	96	141	331	460	484	442	270	71	1732	10	43	89	239	335	367	359	230	60	576	3	53	52	92	125	117	83	40	11	1888										

TABLE II.

Suicides to a Million Persons Living at Different Ages in England and Wales, 1861-1888.

Years.	PERSONS.										MALES.							FEMALES.							Years.			
	All Ages.	15-	20-	25-	35-	45-	55-	65-	75 and Upwards.	All Ages.	15-	20-	25-	35-	45-	55-	65-	75 and Upwards.	All Ages.	15-	20-	25-	35-	45-		55-	65-	75 and Upwards.
1861-1888	71	28	48	70	117	179	241	239	174	108	27	63	104	182	283	407	419	320	35	30	34	39	56	83	91	86	63	1861-1888
1861-1870	66	29	44	62	106	171	226	211	149	99	28	59	93	164	263	377	359	251	34	31	31	35	53	84	87	83	70	1861-1870
1871-1880	70	25	48	70	114	175	244	242	183	107	24	64	104	179	277	409	417	336	35	26	33	39	54	82	95	92	64	1871-1880
1861-1865	65	29	44	59	105	173	224	205	152	98	27	58	90	162	262	371	350	263	34	31	32	32	51	88	87	79	67	1861-1865
1866-1870	66	29	45	65	107	168	229	216	146	100	28	60	96	165	264	383	367	241	34	30	30	38	54	79	87	86	72	1866-1870
1871-1875	66	24	43	65	109	160	234	233	180	100	23	58	97	172	249	383	390	333	33	24	30	36	50	78	96	99	62	1871-1875
1876-1880	74	26	52	75	119	189	254	250	185	114	26	70	111	185	302	433	442	343	36	27	36	42	57	85	94	86	67	1876-1880
1881-1885	74	30	48	75	128	187	246	256	188	114	27	61	110	201	303	419	467	364	36	33	37	43	60	81	93	78	53	1881-1885
1871	66	25	38	67	103	168	224	205	175	99	24	49	105	174	272	367	330	304	34	27	29	33	56	73	96	98	76	1871
1872	66	21	30	62	111	169	208	242	153	97	22	58	85	176	260	359	382	272	35	20	32	41	51	86	92	123	64	1872
1873	65	23	42	63	108	155	229	231	187	99	20	62	97	174	243	369	388	348	32	26	25	32	48	75	103	98	63	1873
1874	64	24	44	65	108	153	248	260	172	104	28	64	101	173	232	420	457	322	32	20	26	33	49	81	92	92	56	1874
1875	67	25	48	68	104	148	239	227	210	101	23	58	100	164	241	398	391	418	34	26	38	39	49	76	96	86	50	1875
1876	73	33	57	70	121	173	249	236	192	111	34	76	110	188	257	419	418	391	37	32	41	33	59	96	95	80	38	1876
1877	69	22	50	72	108	172	229	257	183	109	21	65	108	171	294	403	452	351	31	22	37	39	50	61	70	90	54	1877
1878	70	26	52	70	108	187	258	268	169	107	26	70	101	168	295	425	358	305	36	26	35	41	53	89	108	80	64	1878
1879	80	25	54	85	134	207	260	267	217	123	23	73	126	207	340	427	479	362	40	28	36	47	66	85	110	86	105	1879
1880	77	26	50	76	121	202	275	279	167	120	23	69	109	191	321	486	498	231	37	28	33	47	56	93	84	91	73	1880
1881	75	34	43	77	126	197	249	253	184	116	32	57	115	205	233	415	465	335	36	35	30	42	52	85	102	73	68	1881
1882	74	30	50	73	126	186	247	256	231	113	31	64	108	189	292	419	446	419	38	29	37	41	67	90	93	96	88	1882
1883	73	34	50	73	142	173	246	233	147	111	28	67	102	222	278	403	415	313	38	39	34	46	67	78	106	80	20	1883
1884	75	27	50	80	120	185	247	281	213	117	23	58	119	191	291	439	525	446	35	32	42	45	53	89	76	76	35	1884
1885	73	25	49	73	128	191	241	255	163	114	20	60	108	199	331	415	478	305	34	30	40	41	60	66	87	67	55	1885
1886	81	31	57	82	134	204	267	302	192	125	31	75	125	204	330	448	553	384	39	31	41	41	70	91	107	91	44	1886
1887	79	36	53	81	138	196	261	255	208	122	36	60	122	212	317	472	444	391	39	37	47	42	69	86	73	95	68	1887
1888	80	34	55	79	142	202	261	287	191	124	31	72	119	214	322	450	534	373	39	37	39	42	74	93	93	78	52	1888

PART II.—REVIEWS.

Through the Ivory Gate: Studies in Psychology and History.

By WILLIAM W. IRELAND, M.D. Edin. Edinburgh: Bell and Bradfute; London: Simpkin, Marshall and Co.

It would have been impossible to choose a more appropriate title than that which our classical *confrère* has taken in “The Ivory Gate.” We are reminded by the author of the very ancient fancy, as represented in the *Odyssey*, that the dreams which in our sleep mock us with their fantastic illusions issue from an ivory portal; while the dreams which will be fulfilled in the future pass through a gate of horn—the Greek idea being reproduced in the *Æneid*, where Virgil’s lines run :—

Sunt geminæ somni portæ, quarum altera fertur
Cornea, quâ veris facilis datur exitus umbris;
Altera, candenti perfecta nitens elephanto;
Sed falsa ad cœlum mittunt insomnia Manes.

Before passing from the title, it is curious to note that the origin of this fancy appears to be a pun upon the Greek word *keras*, horn, and *karanôo*, to fulfil; while the Greek word *elephas*, ivory, and *elephairo*, to cheat, suggested the association between false dreams and the Ivory Gate.

The first impression received on opening Dr. Ireland’s book is that Swedenborg has proved a strong attraction to the author, for no less than ten chapters are devoted to this remarkable seer. To place him in a work with such a title means, without further debate, that his dreams have not been fulfilled. It is, in short, boldly throwing down the gauntlet, and challenging those who still retain faith in the prophetic foresight of Emanuel Swedenborg. We shall see whether it is picked up by any worthy antagonist. One thing is clear—that friend and foe agree in acknowledging the superior ability, the remarkable character, the learning, and the ingenious theories of the Swede. Of one of his works—“The Brain: Considered Anatomically, Physiologically, and Philosophically”—we have heard a physician and pathologist well qualified to judge express a high opinion. The fundamental difference between the disciples of Swedenborg and others lies

in this : the former believe that his marvellous knowledge of the brain was due to his intercourse with angels, while the latter are content to attribute it to his studies. The fact is, Swedenborg wrote much in regard to the brain which was incorrect, so that in these instances, at least his visitors from the other world were cruel enough to mislead him.

Some passages in Swedenborg's writings clearly indicate his mental condition ; for example the following, written in 1748 :—

Before my mind was opened, so that I could converse with spirits, and thus be persuaded by living experience, there existed with me for several years such evidences, that I now wonder I could remain all the while unconvinced of the Lord's government by means of spirits. During several years, not only had I dreams by which I was informed concerning the things on which I was writing, but I experienced also, while writing, changes of state, there being a certain extraordinary light in the things which were written. Afterwards I had many visions with closed eyes, and light was given me in a miraculous manner. There was also an influx from spirits, as manifest to the sense as if it had been into the senses of the body ; there were infestations in various ways by evil spirits when I was in temptations ; and afterwards, when writing anything to which the spirits had an aversion, I was almost possessed by them, so as to feel something like a tremor. Fiery lights were seen, and conversations heard in the early morning, besides many other things ; until at last a spirit spoke a few words to me, when I was greatly astonished at his perceiving my thoughts. I was afterwards, when my mind was opened, greatly astonished that I could converse with spirits ; as the spirits were that I should wonder (p. 40).

In his work "*Adversaria*," Swedenborg has these remarkable words : "Flames signify confirmation ; such a flame has . . . appeared to me many times, and, indeed, of various sizes, and of different colours and lustres ; so that while I was writing a certain little work, scarcely a day passed, for several months, without a flame appearing to me as bright as a chimney fire. This was at the time a sign of approbation, and it was before the time when spirits began to speak with me in an audible voice" (p. 40).

We could parallel these descriptions by an actual case in a gentleman, who describes and interprets the signs he sees in the sky and elsewhere, but it is unnecessary.

It appears that an old MS. diary, in Swedenborg's handwriting, which came to light some years ago, consists of a

relation of the dreams and visions which marked his first supernatural revelations. His "Diary," 1743-44, shows what extraordinary dreams he had, and the hallucinations of the senses under which he laboured. One entry may be quoted: "During the whole night, I lay in a strange trance. I know not whether I was asleep or awake. I knew all that I dreamed, but my thoughts were kept bound, which at times produced perspiration. I cannot describe the nature of the sleep during which my double thoughts were, as it were, severed or rent apart" (p. 43).

The explanations of his dreams are fanciful in the extreme, and most people will agree with Dr. Ireland that it is surprising he should have kept a written record of his dreams at the very time when he was engaged in writing about the anatomy and physiology of the organs of the senses and the brain. Swedenborg himself had written that "dreams are suggested by the blood and past thoughts;" yet in his case he regarded them as messages from Heaven.

Dr. Ireland, while explaining the visions and dreams of Swedenborg in the way in which a mental physician would regard similar phenomena in the patients under his charge, carefully avoids ridiculing him in a way which would be offensive to those—and their name is legion—who strongly hold an opposite view. He gives at the close of his study of Swedenborg, a summary of his conclusions, which we may abbreviate as follows (p. 126):—

He inherited a neurotic tendency from his father, who was a spirit seer. Illusions or hallucinations seemed to have been manifested in his childhood, and to have been even encouraged by his parents. His studies were not favourable to fantastic ideas until the study of anatomy and physiology led him to ponder deeply on the soul and the mysteries of our being. Feeling the weakness of the human understanding, he was ready to welcome dreams and the correspondencies of nature as guides. His nervous condition probably commenced as early as 1736, at the age of 48, and slowly became intensified. There were flashes of light in his eyes, sounds in his ears, and strange feelings throughout his whole frame, which were interpreted as divine visions, heavenly voices, and the contact of spirits. He was continually haunted by the odours of spirits, one of the least disgusting being the smell of burnt bread, which was diffused by spirits who when in the world had been addicted to oratory of a deceitful character.

In the state intermediate between sleeping and waking he

saw spirits and angels in complete reality; he heard them speak, and he even felt them. Motor symptoms were less common than sensory disorders, but he had tremors, which he regarded as proofs that spirits had entered his body. He also felt incitements to stretch out his hand and take things. After a period of great nervous excitement in 1744, he had an attack of acute insanity. This subsided in a few months, but he retained delusions, for which he found a meaning.

Well may Dr. Ireland observe: "It is sad to think that it should have been the lot of so earnest a searcher after truth to wander so many years in the mazes of delusion; but the records of mental derangements contain some of the saddest things in fate. Swedenborg's moral and theological writings contain much that is noble and true, though marred by whimsical notions and erroneous statements. Nevertheless, many of the sayings committed to writing will find acceptance amongst thoughtful men, bearing their own evidence in their fitness to other things in the plan of the world" (p. 129).

The subjects of the remaining chapters of this interesting work are William Blake, Louis II. of Bavaria, Guiteau, Louis Riel, Gabriel, Malagrida, Theodore of Abyssinia, Thebaw, King of Burmah. For Dr. Ireland's conclusions, and the evidence on which they are based, we must refer the reader to the work under review itself. He cannot fail to derive both pleasure and profit from its perusal, and will rise from a study of these essays, as we have done, with a high sense of the learning, the industry, and the acuteness of the author. We have no doubt that Dr. Ireland's last contribution to the literature of psychological medicine will be as well received as the "Blot on the Brain." In America the thoughtful and unprejudiced essay on Guiteau cannot fail to be read with the greatest interest.

The Psychic Life of Micro-Organisms: A Study in Experimental Psychology. By ALFRED BINET. Translated from the French by Thomas McCormack. Chicago, 1889.

We have already drawn attention to this ingenious and interesting little book. The author is well aware that his conclusions are opposed to those usually taught in regard to the psychology of the cell, which is generally held to conform to the laws of irritability. M. Richet, the advocate of the

orthodox doctrine, is replied to at considerable length by M. Binet, but with all due respect. With the former, reflex motor action in the simplest forms of animal life is the explanation of all the latter would call psychic life. Romanes is in essential agreement with Richet. To regard the action of the human ovule and spermatozoid as simple excitability, as the author of "*Mental Evolution*," is "manifestly erroneous" (p. 105). The following passage sufficiently expresses the position advanced by our author:—"The sexual elements, and especially the spermatozoid of all unicellular organisms, are certainly the ones which show the most highly-developed psychical functions: the act of seeking and approaching the ovule, which is frequently situated at some distance from where the male element is deposited; the length of road to be travelled; the obstacles to be overcome, all point to faculties in the spermatozoid that are not explainable by simple irritability" (p. 106).

The ambiguity of this favourite term is insisted upon by M. Binet, or, to adopt Kant's simile, the explanation is no better than an easy-chair upon which the mind reposes. To say that irritability is the property of reacting to an external stimulus is not to the purpose if it is intended to exclude mental action, seeing that every psychical manifestation consists in a response to an excitation. M. Binet proceeds to consider whether the experiments made in muscular physiology, under which M. Richet includes that of all nerve cells, embrace the entire psychology of an independent organism. The reply is a distinct and emphatic negative. The book before us is an honest endeavour to marshal a number of facts which will not allow of being confined within the petty limits of cellular irritability. In summing up his evidence, the author is content to support his argument by one phenomenon, namely, the existence of a power of selection, which is undoubtedly possessed by micro-organisms for the purpose of obtaining food, and in the carefully-studied actions connected with conjugation. If Romanes is right in making the power of choice the test of psychical faculties, it must be granted that the nerve cellule possesses this quality. To say that such choice depends simply upon the chemical composition of the cell on the one hand, and that of the body selected on the other, is, in the opinion of M. Binet, a purely verbal explanation. Chemistry is essential to physiology, but it does not explain it. It, therefore, does not account for the intelligent choice made by protoplasm. The author is, of course, pre-

pared to follow the same reasoning in regard to the vegetable kingdom. The plant assimilates the manure which is suited to its growth and development, and rejects that which is not so. Is this choice a proof of psychic life? Many would hesitate to reply in the affirmative. For such M. Binet's argument would prove too much, namely, the psychology of plants as well as animals.

Our space will not allow of a complete analysis of this book, but we may conclude by M. Binet's *résumé*, that simple cellular psychology has no foundation and is a mere conception of the mind, and that everyone has so far failed to demonstrate that "the movements of the living being, in moving towards a distant object, can be explained merely by a chemical affinity acting between that being and that object. It is certainly not chemical affinity that is acting, but much rather a physiological need" (p. 115).

Whatever may be the ultimate verdict of scientific men upon these views, there can be no doubt of the great ability with which the author has supported his thesis, and we recommend our readers to obtain this treatise for themselves.

Les Frontières de la Folie. Par le Dr. A. CULLERRE. Paris : J. B. Baillière et Fils, 1888.

Traité Pratique des Maladies Mentales. Par le Dr. A. CULLERRE. Paris : J. B. Baillière et Fils, 1890.

M. Cullerre has displayed great literary merit and a wide range of knowledge in these two works, the former of which is to be regarded as to some extent an introduction to the latter. At the same time, there is a certain amount of overlapping. The author comments upon the contrast between the credulity of the public in regard to medical matters, and their incredulity whenever mental maladies are discussed. The visitor to an asylum can scarcely believe that he sees a company of lunatics, for he has been led by books to expect to see a number of chattering maniacs. M. Cullerre quotes an academician who wrote: "Joan of Arc has by some been burnt, and has been explained by others. The English have made a martyr of her, the philosophers have called her hysterical. I prefer the English." Another academician regards her as having possessed

the lowest order of mind, as if, exclaims our author, to discover a natural explanation of their genius, was only to lower great minds. It is pointed out that a slight touch of mental disorder is not altogether a disadvantage in the world, so that, if it were stamped out, civilization would be stamped out also, not in consequence of an excess of wisdom, but an excess of mediocrity.

The first work enters into the nature and origin of insanity, as well as its boundaries; the physical, intellectual, and moral signs of hereditary degeneration. A chapter is devoted to various mental obsessions, including agoraphobia; the insanity of doubt, the dread of contact (*délire du toucher*), onomatomania, arithmomania, coprolalie, and the blaspheming mania of Verga. The employment of the word "obsession" has scarcely taken so definite a position in our psychological nomenclature as in that of France. It is a useful term, however, as distinct from delusion or hallucination. The irresistible desire to pronounce words, from which the patient revolts, is well expressed by the word in question. The French employ the word *obsédés* for those who labour under this form of mental malady, and it would be well for us to introduce the corresponding substantive, the obsessed. Impulses to suicide, homicide, intemperance, theft, purchasing (*oniomanie*), to gamble, to burn, form the subject of another chapter. They are not an object of obsession in a technical sense, although the author incidentally employs this expression. Under the important heading, "The Eccentric," M. Cullerre describes the unstable, the adventurers, the extravagant, the sordid, the proud, the dissipated, the inventors, the dreamers, the Utopian. A separate work might well be devoted to eccentricity, which has hardly received the attention from alienists which it deserves. The insanity of persecution is treated of in another chapter. Truly, as the author says, if there is one form of mental disorder more clearly marked out than another, it is this. It is generally developed in regular order—first a period of restlessness, and of general defiance; distinct hallucinations and disorders of sensation occur. Next, delusions become organized, and take definite form. After months, or even years, ideas of grandeur arise, the patient becomes a megalomaniac until his mind becomes weakened, and he ends his days in dementia. He well describes the symptoms of the hereditary form of the same mental disorder. He is the fantastic, ill-balanced being in whom, from infancy, may be recognized the marks of degeneration, including facial asymmetry, various

nervous troubles, and precarious outbursts of excitement. In adolescence is an example of reasoning eccentricity; he is intolerably conceited, and begins to pose as the victim of persecution. Contrary, however, to the true type already described, he has no systematized delusions of persecution, and is free from hallucinations. Indeed, his notions, false as they are, rest upon some plausible foundation; he rarely becomes demented, and is more likely to end in apoplexy. He remains all his life on the borderland of insanity. Intermittence may mark the course of such a life, there being periods of exaltation, and intervals of calmness contrasting with the abnormal condition. It is characteristic of this hereditary form that the patient, under the pretext that he is persecuted, becomes himself a violent persecutor—unscrupulous and imperturbable. He also besieges the Courts of Justice. For several instructive examples we must refer to the work under review.

Under the same head (*persécuteurs*) we have a sketch of the subjects of the *Délire de la Chicane*. They are called *processifs*. This insanity is closely related to that of persecution, or moral mania, and is hereditary. Signs of degeneration, such as cranial anomalies, are present. The moral sense is perverted, and selfishness is a ruling passion. Lying is a besetting sin, and they will not brook any contradiction. An outburst of insanity occurs from a trivial cause, as the loss of an action, &c. He regards himself as a martyr, and the judges as deceivers. They are amongst the most dangerous members of any community. A third-class of hereditary *persécuteurs* are the jealous, who are irresistibly driven by their morbid feeling to commit crime. Then there are the mystics, fanatics, and erotomaniacs. Dr. Ireland's recent work, reviewed in this number of the *Journal*, affords ample material for the study of this class. Under the designation of the "*perversis*," we have four great classes, the hysterical, the liars, simulators, and criminals. Sexual anomalies and perversions fill one chapter, another is devoted to legal medicine in relation to insanity. The tenth and last chapter treats of mental disorder and civilization.

This brief outline will serve to show the wide range of subjects traversed by the author, and as we have already intimated there are points in common between "*Les Frontières de la Folie*" and the "*Traité Pratique des Maladies Mentales*." The latter contains a historical sketch of the insane, a full description of the symptoms, prognosis, diagnosis, and pathology of mental disorders, ending with an account of the

legislation for the insane which has been adopted in France. The work is a manual, and can be recommended as clear in its style, methodical in arrangement, and of practical utility.

London (Ancient and Modern) from the Sanitary and Medical Point of View. By G. V. POORE, M.D., F.R.C.P. Cassell and Co., 1889.

We take the earliest opportunity of drawing the attention of the readers of this Journal to Dr. Poore's little book on ancient and modern London, which is described from a sanitary and medical point of view. It contains an account of the College of Physicians, which is well told. An engraving of Linacre's house, taken from a print in the "Gold-headed Cane," is of interest, seeing that he was the founder and the first President of the College. A section on the "Severance of Medicine and Surgery" brings into clear relief this important historic point. On the other hand, the physicians were an outgrowth from the priests. If we are not mistaken, the evidence of this union—the granting of the degree of M.D. by the Archbishop of Canterbury—was illustrated by the doctorate of Willis, the clerical physician of George III. when insane. On the other hand, surgeons were originally barbers, who in the course of time drew teeth from the mouth, and blood from the arm. In 1308 the London barbers were incorporated into a guild, and in 1460 the Guild of the Barber-Surgeons was a City Livery Company. An Act passed early in the reign of Henry VIII., for appointing physicians and surgeons, contained a preamble in which the science and cunning of physic and surgery are spoken of as being exercised by a great multitude of ignorant persons, of whom the greater part have no manner of insight into the same, nor in any other kind of learning. They are represented as using sorcery and witchcraft, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the King's liege people. It was provided that "all practising medicine and surgery should be previously examined, approved, and admitted by the Bishop of London or the Dean of St. Paul's, London, or for the country by the Bishop of the Diocese, who shall call to his aid for this purpose four doctors of physicks, and for surgery other expert persons in that faculty." This Act must have exercised a beneficial effect. Dr. Poore has given only a brief reference to Bethlem Hospital.

Annual of the Universal Medical Sciences; a Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M.D., Lecturer on Laryngology and Rhinology in Jefferson Medical College, Philadelphia, etc., and seventy Associate Editors, assisted by over two hundred Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromo-Lithographs, Engravings, and Maps. 1889. F. A. Davis, Philadelphia, New York, and London.

This work is on a scale commensurate with the land from which it is issued, and would be a remarkable contribution to medical science if it appeared at an interval of five years, but as an annual production it is an astonishing monument of labour and enterprise. We wish it every success; Dr. Sajous deserves it.

Of the contribution to Psychological Medicine, made by Dr. Brush, we can speak in favourable terms. He has brought together, in the space assigned him, the material points required in a notice of the salient features of the development of psychological medicine during the twelve months over which his survey extends.

This retrospect could not have been placed in better hands. Of the most practical importance are the reports on Hypnotics. He finds that chloral continues to be a favourite in the United States, and that the bromides, opium, hyoscyne, hyoscyamine, hyoscyamus, paraldehyde, and urethan are employed in the order in which we have enumerated them. Dr. Thompson, of the Bristol Asylum, is quoted as preferring hyoscyne hydrobromate as the calmative in mania of any form, and the busy restlessness of general paralysis, the dose being gr. $\frac{1}{200}$. Eugene Komrad has found the hydrochlorate valuable in doses of one-half to one milligramme ($\frac{77}{10000}$ to $\frac{154}{10000}$ grain), hypodermically. It is a remedy requiring great caution, and to be avoided if there is heart disease. Urethan is stated by Adam, of Paris, to have been used with advantage and without any ill effects, in doses varying from 15 to 75 grains. Griffith and Kirby have found amyl-hydrate in capsules yield more favourable results than urethan, paraldehyde, or chloral. Boubila and Hadjes report that methylal is a good hypnotic in simple manias, acute mania excepted; in *folie à double forme*, during the period of depression, in intermittent mania, epileptic mania, and in organic dementia. It is soluble, agreeable in taste, and is perfectly safe. However, the remarkable and justly popular

hypnotic of the year is sulphonal, discovered by Bauman. The length of its name must satisfy the most pedantic of chemists—diethylsulphondimethylmethan. The results of experiments made by numerous observers are recorded, all in favour of the drug, although it seems to fail in producing sleep in some instances. We have found it of the utmost use in doses varying from 15 grains to a drachm. Dr. Brush has used it in doses ranging from 10 to 30 grains in acute and chronic insanity, alcoholism, the opium habit, insomnia, hypochondriasis, and hysteria. Dr. Brush found that it acted very satisfactorily in alcoholism and the opium habit, but whether it was useful in the other forms is not stated. Fischer, of Budapesth, is quoted as having found antifebrin especially valuable in neuralgia, and some cases of headache, in doses of from 7 to 20 grains, while as a hypnotic he found it uncertain.

From the above it will be seen how valuable a *résumé* is given in this retrospect in regard to one point. A book which comes out every year and keeps its readers *au courant* with all that is doing in the various departments of medicine must obviously be a great boon to physicians and general practitioners. We might, of course, illustrate this by any number of examples similar to what we have given, but enough has been said to support the statement with which we commenced this notice, and we have no doubt that every medical library and many private persons will become possessed of this meritorious publication.

The work is in five parts, is illustrated, and is splendidly got up. Dr. Sajous has laid the profession under a deep debt of gratitude for the care and labour he has bestowed upon it.

Les Aliénés en 1789 et en 1889. Par le Dr. E. RÉGIS.
Bordeaux: Feret and Fils, 1889.

This pamphlet of twenty pages is the first of a course of Lectures on mental medicine delivered by Dr. Régis, at Bordeaux. The lecturer, formerly the head of the *clinique* of mental disorders in the Paris Faculty of Medicine, and at the present time the physician of the Maison de Santé of Castel d'Andorte, Bordeaux, states that the Faculty of Medicine of that town does not possess a chair of Psychological Medicine. He therefore is a volunteer who now, and for some years, has

endeavoured to supply a gratuitous course of lectures. As will be seen from the title, this discourse consists of a historical sketch. The lamentable condition of the insane in France, Germany, and England, at the close of the last century is described. The subsequent reforms are sketched, and no more said than is due to the courage and philanthropy of the never-to-be-forgotten hero of 1792. Ample justice is done to the corresponding movement in England commenced at York, and Dr. Régis, with great breadth of view and good feeling, refuses to regard the petty question of the priority of particular men in the initiation of the reforms which ultimately proved so beneficial to humanity. On the contrary, he thinks it preferable "les confondre dans une mutuelle admiration."

The lecturer does not close without impressing on his hearers the duty of not only applauding the deeds of our ancestors, but of advancing forward ourselves and securing by our own exertions the progressive amelioration of the condition of the insane.

We can only hope that the Bordeaux Faculty of Medicine will establish a chair of Psychological Medicine, and place Dr. Régis in it.

An Epitome of the Synthetic Philosophy. By F. HOWARD COLLINS. 1889.

The author has endeavoured to give us in this volume the principles of Mr. Herbert Spencer's synthetic philosophy in a condensed form, and in order to do this, the "First Principles," "Principles of Biology," "Psychology," "Sociology," and "Morality" have been divested of their illustrative material, and nearly nine-tenths of the original matter eliminated.

When we consider the difficulties of such an undertaking we cannot fail to give credit to the author. Mr. Spencer has himself expressed surprise that so much could have been put into so small a space without sacrifice of intelligibility, and at the same time he acknowledged that the condensed statements were correct and clear. To the student of Spencer this volume should be especially valuable, although possibly a perfect comprehension of the cardinal principles of his philosophy, presented as they are in a series of abstract propositions, may prove a formidable and tiresome task without the aid of concrete illustrations.

Lectures on Nervous Diseases. By AMBROSE L. RANNEY, A.M., M.D. Philadelphia: F. A. Davis. 1889.

We have received this book for review, but must postpone its criticism till the next number of the Journal. This much may, however, be said now, that the anatomico-physiological basis of nervous diseases, and also the methods of investigation in this field of medicine, form essential features of the book, and further, that the author is a warm advocate of the graphic method of instruction—the work being profusely illustrated.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *American Retrospect.*

By FLETCHER BEACH, M.B., M.R.C.P.

“American Journal of Insanity,” January and April, 1889. “Alienist and Neurologist,” January, 1889. “Medico-Legal Journal,” December, 1888. “The Journal of Nervous and Mental Disease,” February, 1889.

“The American Journal of Insanity” for January, 1889, opens with a paper “On a Case of Shock, with some observations on the vaso-motor system,” by Dr. H. S. Williams.

A man, aged 31 years, afflicted with chronic mania, received a kick in the abdomen, administered by another patient. In four minutes from the time of receiving the injury the man was dead. At the autopsy, the abdominal and thoracic viscera were found to be healthy, but there was excessive hyperæmia of the encephalon, with general capillary hæmorrhage, which appeared to be the cause of death. According to modern pathology, “shock” is a result of the vaso-motor paresis, or paralysis of the heart. In this case the heart was healthy, but there was vaso-motor paralysis of the vessels of the head. Dr. Williams then discusses the mode of action of the medullary centre, and is of opinion that it is a centre of vaso-inhibition, through interference with the ganglia of the sympathetic, and that the sympathetic ganglia, which are centres of vaso-constriction, are the ultimate vaso-motor centres proper. Applying this theory to the case in question, he believes the following to be the *rationale* of the phenomena:—“Force applied to solar ganglia; stimulus to vaso-inhibitory and cardio-inhibitory centre, through splanchnic; reflex (inhibitory) stimulation of cervical sympathetic, with resulting relaxation of cerebral vessels, and momentary systolic paralysis of the heart.”

During this momentary cessation of heart beat, blood ceased to flow in the relaxed cerebral vessels, but the systemic vessels drove the blood through their capillaries, and the relaxed cavities of the heart were filled with blood. The intrinsic ganglia of the heart, overcoming the inhibitory influence of the vagus, caused the heart to contract with great vigour. What happened? The systemic vessels, we must remember, were contracted to a very small calibre, while the cerebral vessels were completely *atonic*; hence the blood from the renewed heart beat, finding a constricted outlet in most directions, would be forced towards the point of least resistance—the cranium—and would come against the unresisting vessels with a shock comparable to a blow from without. Rapid dilatation must ensue, until the vessels are distended to their utmost capacity. There would be excessive lateral pressure in the distended cerebral vessels, which would be too great for them, and a general laceration occurred. In this case, no doubt, there was an abnormality in the walls of the cerebral vessels, for the same blow which caused the death of this man would not have proved fatal to a person with healthy tissues.

The author concludes his paper by saying that “whatever may be thought of the explanation, the pathological conditions remain; and we must recognize the certainty that shock due to abdominal concussion may cause death by other means than the paralysis of a distended heart.”

Lunacy Legislation, as Proposed by Dr. Stephen Smith and others.

Dr. Walter Channing criticizes the “Report on the Commitment and Detention of the Insane,” presented at the Buffalo National Conference of Charities in July, 1888, by a committee, of which Dr. Stephen Smith was chairman.

Dr. Channing doubts whether at present it is possible or desirable to establish uniform lunacy laws for all the States, and proceeds to examine and criticize the propositions with reference to the admission, detention, and discharge of the insane. It is impossible, in the space at our command, to state his various criticisms, but a few may be mentioned. He regrets that Dr. Smith has not emphasized the necessity of early hospital treatment, and he objects, as did the Parliamentary Bills Committee of the Medico-Psychological Association, to a judicial commitment of the insane to a hospital or asylum. Objection is also taken to the suggestion that the alleged insane person should be fully informed of the action to be taken against him “on the conclusion of these proceedings, and the completion of the order of commitment,” because a jury can be summoned if the alleged insane person or his friend wish it. Also, if the patient or a friend of his is dissatisfied with the order of commitment, an appeal may be made to a justice of a higher court than the one signing the order. There is great force in this objection. It is bad enough, as many of us in England think, to let the patient know that he may have a

trial by jury after being admitted into the asylum, but to explicitly inform the patient, while he has practically unrestricted liberty, that certain proceedings are being taken against him, is liable to make the patient excitable and dangerous. If the patient is to be notified of the legal proceedings, in order to allay the sense of injury he may feel in being committed, this should be done before the proceedings are commenced. Dr. Channing does not agree with Dr. Smith's proposition that "the insane in custody should be under the immediate care and treatment of qualified persons of their own sex," and in this belief he is no doubt correct. Impartial testimony from hospital superintendents has proved that women who have held hospital positions have not been able to perform their duties as satisfactorily as men. He is of opinion that "they have been of service in making uterine examinations, but that in performing the general executive duties of assistant physicians they have probably not done more than two-thirds of the work of the men." The writer's hope is that women physicians will not be appointed Assistant Medical Officers in English Asylums for many years to come.

Dr. Channing is strongly in favour of trying the boarding-out system, but with the proviso that in each State a Commissioner in Lunacy, assisted by a subordinate official, should supervise the boarded-out insane. He is of opinion that the subordinate should devote his whole time to supervision, and the Commissioner should give considerable attention to it.

The Barber Case—The Legal Responsibility of Epileptics.

Dr. Wise thinks the case worthy of record "not only as an illustration of the conception of epilepsy and mental responsibility of epileptics, by the ordinary lay mind, as presented in the verdict of the jury, but as a very marked instance of constancy in the transmission of one form of nervous disease for three generations."

Richard Barber, aged 27 years, was indicted for the murder of Ann Mason, on the night of the 16th March, 1888. He seems to have been on friendly terms with the Masons, but during his visit he knocked Richard Mason senseless on the floor, and, going to the adjoining room in which Ann Mason was, murdered her and then set the house on fire. Barber was next seen on the highway, and when arrested and accused of striking Mason and his wife said, "I do not remember doing it," and to this or similar statements he resolutely adhered.

The line of defence rested chiefly on an inherited epileptic diathesis, epilepsy in the prisoner until the age of nine years, symptoms of nocturnal fits the preceding winter, and the absence of motive for the crime.

The usual conflict of medical testimony occurred, those summoned for the defence stating that when Barber committed the crime he was in the unconscious epileptic state, while those who appeared for

the prosecution testified that he was sane and conscious at the time. The prosecution endeavoured to show motive for the crime. Exception was taken to the ruling of the judge by the defendant's counsel. It was as follows :—

You will, therefore, see that there may be a very broad difference between what medical men define as insanity and legal responsibility. No matter how insane a man may be, no matter how much under the influence of an epileptic attack, or epileptic furor, no matter by what force impelled, resistible or irresistible, if this defendant at the time he did the act knew the nature and quality of the act, and knew that it was wrong, then, gentlemen of the jury, he is in the eye of the law legally responsible for the act that he has done, and if that act constitutes a crime he must suffer the punishment which the law prescribes.

He further charged the jury :—

That it is not necessary for the people to show to you that there was an adequate motive for this act. It is not necessary for the people to show you what his motive was, but they claim that the reason and the method and the plan and design, apparent in the act which he did, in itself indicate insanity, and indicate that there was motive for the act itself.

This ruling eliminates one of the most important tests of insanity and responsibility in relation to the alleged morbid condition of the prisoner. It was a reasonable prayer of the defendant's counsel

That motive is an essential element of the crime, which cannot be presumed, but must be established by a preponderance of proof as much as any other element. . . . If the jury believe the prosecution has not established any motive for the crime by competent and legal evidence, and beyond reasonable doubt, it should be regarded as important on the question of epilepsy.

The judge refused to modify the charge, and the jury finally brought in a verdict of guilty of murder in the first degree. The prisoner was sentenced to be hanged.

From a medical point of view Barber's case was interesting, probably being as marked an instance of the transmission of a purely epileptic neurosis as there is on record. Eighteen consanguineous relatives suffered from epilepsy, and Barber himself had more than four hundred attacks of *haut mal*.

The Bearing of Hospital Adjustments upon the Efficiency of Remedial and Meliorating Treatment in Mental Diseases.

By hospital adjustments, Dr. Bancroft means "all external circumstances and conditions in the situation, surroundings, and relations of the patient which may have an influence upon states of mind or feeling—these as distinct from purely medical treatment." The suggestions proposed are applicable to two classes of patients; first, those for whom there is hope of recovery; and, second, those who, though incurable, still feel the influences surrounding them. In the early stages of hospital care of the insane repression was overestimated, while the demand for diversity and variety of influence was hardly recognized. In the future the hospital will be the out-growth of a study of the ideas and wants suggested by many observations. In the old hospitals incompatible characters unavoidably came in contact, and this no doubt painfully impressed the new

comer. Other defects are the loss of much personal freedom, and the noise to which the inmates are exposed. Although the noisy patients are few, yet in buildings planned and located in a compact body a large number are liable to this serious annoyance. However this may be in America, it is the custom in England to keep such patients together and removed as far as possible from the others. Another evil is the influence on the minds of those brought for treatment in the early stage of the disease, when brought in contact with others in whose countenances no hope is plainly imprinted. Here, again, the practice in England differs—patients in the early stages being placed in separate wards. The traditional style of hospital building has many radical evils, which interfere with the best results of remedial treatment and lower the rate of recovery. Observation has shown that convalescence appears earlier in recent curable cases, when adverse influences can be avoided, and all external adjustments are in harmony with the tastes of the patient. An overstrained effort at economy has been responsible in some measure for the monotonous architecture. The disease being once christened insanity, the cost of treatment shrinks in public estimation to less than that of living in health. Until this error of opinion ceases to have dominant influence, an ideal hospital for mental diseases will not be realized. “Building ought to represent at once the largest knowledge and practical experience of the alienist physician, reduced to forms of convenience and grace by the resources of the architect.”

Of this there is not the slightest doubt. Three features should be made fundamental and indispensable in every plan. The first is that buildings should be provided for the noisy classes separate from others. A second and most essential feature is the provision of detached houses, placed here and there in the grounds, in pleasing variety and homeliness, while convenient for administration. The third feature is that, when for economic reasons larger buildings are desired, a long monotonous ward style should be discarded, and a construction adopted such as will afford the physician the largest control over the relations and contacts of his various patients. Happily these features are to be met with in many English asylums.

The Encephalic Circulation and its Relation to the Mind.

Dr. Williams fully recognizes the importance of the “nervous” element of the intellect as not only antecedent to the vascular change, but its consequent as well as its co-worker. He wishes to present the more elementary phase of the subject, leaving the complementary aspect for consideration in a subsequent paper. He first considers the conditions under which the encephalic circulation is carried on, and then inquires as to the means of investigation to be used in gaining an insight into the true relations between the changes occurring in it and various mental states. There appear to be four processes—vasculo-lymphatic, arterio-serous, arterio-venous, and inter-arterial fluctuations—which afford a view of the possible methods of change in the encephalic circulation. These changes are brought about by the vaso-motor nerves which co-ordinate the encephalic vascular apparatus. Centres of vaso-constriction lie in the cervical sympathetic ganglia, in the medulla, and, perhaps, in the cerebral cortex ; but the control of the vessels is due to the intrinsic ganglia

in their walls. Just as the ganglia of the heart influence the action of that organ, so the ganglia of the arterial walls must act to control the *local* changes in the arterioles. Numerous influences complicate the action of the extrinsic and intrinsic ganglia, the most prominent of these being dependent upon the heart. A weak heart may, by altering the cerebral circulation, change what would otherwise be a powerful mind to one of lassitude and inapplication. On the other hand, a powerful heart enables the brain to innervate with its utmost vigour. A constant interchange of forces is taking place between the heart and the cerebral vessels, and the mechanism, by which the same ganglia and medullary centres preside over both, admits of a marvellous co-ordination. "The same impulse, which coming from the cervical ganglia accelerates the heart beat, may stimulate a contraction of the vessels to meet the shock; and a medullary impulse, inhibiting the cardiac action, inhibits also, through the cervical ganglia, the power of the cerebral vessels, thus maintaining that equilibrium which is an essential concomitant of equable thought." Another influence bearing upon the cerebral circulation is that resulting from changes in bodily position. Undoubtedly calm, unimpassioned thought is best carried on while the head is inclined forward, but probably more depends upon the position of the lower extremities. Feeble persons find they can think best in the recumbent position; others, again, think best while walking. Changes in the digestive apparatus, variations in external temperature and other causes also affect the cerebral circulation, and show the necessity for the unique cranial apparatus, by means of which comparative stability and equability of the encephalic circulation are made possible. Its circulatory supply is well provided for; for, though the average brain represents only about two per cent. of the bodily weight, yet it receives five times its share of the blood. It has been estimated that during a complete circuit the brain receives twenty-four ounces of blood; and, as the average capacity of the cerebral vessels is said to be only about four ounces, the blood must pass through them at about six times its average rate of speed. Now, since the cortical grey matter receives ten times as much blood as the cerebrum, the importance of the blood supply is made plain; and at the same time we have evidence of the "tremendous energizing and the exceedingly rapid organic metabolisms which accompany mental manifestations." The consideration of the mental equivalents of changes in the encephalic circulation is then considered. Some of the most conspicuous phenomena of mind are connected with arterio-serous, arterio-venous, and inter-arterial fluctuations.

Taking first the arterio-serous, we find that in some abnormal states, owing to the failure of the vaso-controlling centres to properly co-ordinate, a general dilatation of the arterioles causes an unusual hyperæmia of the cortex. Oxygen-laden corpuscles are constantly sweeping through the distended arterioles, keeping up a ceaseless, inefficient energizing. Irregular vibrations are going on everywhere,

an inchoate, meaningless rush of ideas being the result. The normal mind has gone, and the individual is a lunatic who cannot sleep and cannot rest.

Passive congestion is an extreme case of arterio-venous oscillations. A feeble current flows through the vessels, and we have a relaxed atonic condition, deficient oxygenation, and correspondingly inefficient energizing. There is lassitude and depression of mind, amounting in extreme cases to hypochondria or melancholia. Here there may be also insomnia, because organic evolution is at all times complete. "Any turgescence of the veins of the brain is a practical withdrawal of so much blood from the efficient circulation, and, according to the degree and the permanence of the condition, it will result in mere hebetude of mind, or in complete mental alienation." Abnormalities of inter-arterial fluctuations result chiefly from inefficient co-ordination between different arterial branches. A case of simple mania may suffer from a failure of the vaso-controlling apparatus to properly manipulate the blood. The ideas of a mind in this condition run on in a desultory manner, their associations being often far-fetched and illogical. Many a mental process otherwise obscure finds in the explanation of the blood supply a tolerably clear and palpable elucidation.

The author is of opinion that the process of self-culture might be considered the gaining of an unconscious inhibitory control over the encephalic arteries, and all will agree with him in his statement that everyone who inherits mental instability should strive to gain this control. It can only be acquired "through the medium of the subjective resultant of the organic processes; that is, through the directive thoughts of consciousness," and these operate mediately through influence upon the molecular conditions of the encephalic cells. Thus he arrives at the point from which he started, viz., the mutual dependence of the vascular and cellular forces.

Clinical Observations on the Action of Sulphonal in Insanity.

Dr. Mabon records a series of observations on patients suffering from simple melancholia, melancholia agitata, acute and chronic mania and dementia. Sulphonal was administered 119 times on 114 nights, in doses of 15, 30, 45, and 60 grains. Generally 30 grains were required to bring about a quiet and refreshing sleep. It was given at first suspended in mucilage, but later in hot milk and hot gruel, the advantage of the latter menstruum being increased promptness of action. Dr. Mabon thinks that the advantages of sulphonal over other hypnotics are the absence of disturbances of digestion, secretion, circulation, and respiration; its easiness of administration, its tastelessness, its odourlessness, and the resulting sleep closely approximating that of nature.

Transactions of the New England Psychological Society.

Dr. French read a paper "On the Prognostic Value of Certain Habits and Delusions of the Insane," and his conclusions were :— First, that "the rhyming habit," if long continued, is prognostic of incurability; second, that "the writing habit," if persistent, indicates the same condition, when the writing is meaningless and incoherent in character; third, that the habit of fantastic decoration is prognostic of a chronic condition and of incurability; fourth, the systematized and automatic movements of the *lower limbs* in acute mania and in maniacal excitement following chronic mania, if persistent and continued for a long time, are prognostic of death from exhaustion; and, fifth, "electric delusions" are of neuralgic origin and are prognostic of incurability.

Dr. Benner followed with a paper entitled, "Cigarette Smoking, especially in the Young." In some investigations carried out by the author among the schools of Lowell the smokers were paler, thinner, more restless, less vigorous, and less proficient in study. The age of 145 smokers averaged ten years. In several cases there were marked motor restlessness, an overacting, excited heart, a toneless pulse, a pale and anxious countenance, and a general muscular weakness, with shortness of breath on exercise. The most hopeful plan of prevention lies in home training and elementary instruction in the schoolroom.

Dr T. P. Brown then read "A Report of a Case of General Paralysis of Fourteen and one Half-Years' Duration." The features of special interest were the slow development and progress of the mental and physical symptoms and the consequent long duration of the disease.

All these papers were discussed, and the meeting closed with the appointment of a Committee to select subjects for collective investigation in mental pathology and clinical history by the medical officers of New England asylums, an example which should be followed by the Medico-Psychological Association of Great Britain and Ireland.

Idiocy and Feeble-Mindedness in Relation to Infantile Hemiplegia.

This is a paper in the "Alienist and Neurologist," by Dr. William Osler, and is founded on a report of twenty-two cases at the Pennsylvania Institution for Feeble-Minded Children, under the care of Dr. Kerlin. A certain number of cases of infantile hemiplegia are congenital, some due to foetal meningo-encephalitis, others to injuries received during delivery. The cases of bilateral spastic hemiplegia, of bilateral athetosis, and of spastic paraplegia in children are nearly always of this nature. Most of the cases occur during the first two years of life. The affection sets in with convulsions, often with fever, then coma of variable duration, and when the child recovers consciousness there is found loss of power on one side. This mode of onset

occurs in three-fourths of the cases. After a time the paralysis begins to improve; the face first gains power, speech is recovered, and power returns to the leg. The arm does not improve, and usually wastes. Most of the patients have the characteristic hemiplegic gait. Post-hemiplegic movements occur very frequently in the palsied members. Sometimes more serious consequences follow, some children becoming epileptic, others presenting all grades of mental defect from a simple feeble-minded condition to profound idiocy. There are many such cases in the Darenth Asylum for Imbecile Children.

The twenty-two cases at the Pennsylvania Institution are grouped as follows:—High grade, five; medium grade, six; low grade, five; idio-imbecile, two; idiot, four.

Strümfell believes that the primary lesion is an encephalitis of the grey matter of the motor regions, analogous to the polio-myelitis of the anterior horns of the spinal cord in infantile spinal paralysis. Sometimes there is embolism, at others thrombosis of the cortical veins. When death occurs some years subsequent to the attack, either sclerosis involving the motor zone, or large areas or spaces in the cerebral substance filled with fluid and covered by the membranes are found. The experience of the author of this retrospect is that the latter condition is most often present. Particulars are briefly given of the twenty-four cases on which the paper was founded.

The Question of Responsibility in Inebriety.

Dr. Crothers gives some histories of cases which have been tried in Court during the past year; they illustrate the confusion of medical testimony and the necessity of a clearer knowledge of the subject.

Five cases are related in which murder took place while the murderers were under the influence of drink. Dr. Crothers points out that the object of an inquiry by the medical man is to determine the mental health of the prisoner at the time the crime was committed, and to ascertain whether he realized the nature and consequences of his acts and had power of self-control. Bearing in mind that the prisoner was an inebriate and committed the crime while using spirits, the first study should be into the form of inebriety from which he suffered. If a periodical inebriate, the character of drink paroxysm, its duration, and the free interval should be studied, to find out how far the brain was dominated by morbid impulses. The second inquiry should be of the crime, and the circumstances associated with it. If it is shown that the prisoner was using spirits at or before the time the crime was committed, and there is no motive for the act, which may be committed in a strange way, or in a methodical manner, there is a probability of mental unsoundness. The third general study should be of the origin of inebriety. Where many causes are more or less distinct, the brain failure can be readily traced. Not infrequently the inebriety is merely a symptom of brain degeneration. The fourth line of study should consider the influence

of heredity ; a drinking or insane ancestry points to a direct entailment of mental degeneration and feebleness and a more or less unstable organism. A consumptive, epileptic, hysteric, and odd, peculiar parentage are always followed by defective children. "If the facts on these four points of inquiry sustain each other, the conclusion of insanity is inevitable."

Some Circulatory and Sensory Disorders in Neurasthenia.

Dr. McBride has written this paper in order to give a brief statement of the chief derangements of the sensory nervous system and of the circulation which are often found in this disorder. One of the frequent symptoms is functional derangement of the heart, the most usual form being excited action, which may be excited by the most trivial occurrences. Then there is a class of cases in which violent and tumultuous action of the heart occurs on lying down at night, the paroxysms often being so severe as to interfere with sleep. Dr. McBride thinks it quite useless to give remedies for this special symptom, as it disappears on relieving the general condition of the patient. Chills, followed by high fever, are not infrequent in brain exhaustion. In these cases, while the bodily health continues good, there is cerebral congestion, sleeplessness, inability to apply the mind to work, and loss of interest in usual occupations. Local congestions and anæmia occur when the circulation is irregular and inefficient, and bloating of the hands and feet when the circulation is feeble. Occasionally an abnormally slow pulse is observed. This is usually associated with evidences of deficient blood supply to the body generally.

The sensory disorders of neurasthenia are manifold. Peculiar sensations associated with headache, a tired feeling in the head (occurring in men who suffer from brain exhaustion from overwork), tender spots on the scalp, loss of sensation on one side of the face, pain and anæsthesia occurring in the extremities, numbness of the legs when sitting, uncomfortable sensations of heat and cold in different parts of the body, dulness of hearing, weakness and various defects of sight, and elaborate visions are but a tithe of the peculiar manifestations found. There is no disease more generally curable if treated under proper conditions, and none more rebellious when unsuitable methods of treatment are adopted.

The "Medico-Legal Journal" contains a "Report of the Committee of the Medico-Legal Society on the best Methods of Execution of Criminals by Electricity." In consequence of a law recently passed by the Legislature of the State of New York, all murderers after January 1st, 1889, are to be put to death by electricity. A number of experiments were made on dogs, and as a result of mature deliberation, it was recommended that death should be caused by an administration of electricity in the following manner:—A table covered with rubber cloth and having holes along its borders for

binding the criminal to it, or a strong chair should be procured. The prisoner lying on his back, or sitting, should be bound upon the table or in the chair. One electrode should be so inserted into the table, or into the back of the chair, as to impinge upon the spine between the shoulders. The head should be secured by means of a sort of helmet, fastened to the table or chair and to this helmet the other pole should be joined, so as to press firmly upon the top of the head. The electrodes should be metallic, between one and four inches in diameter, and covered with sponge or chamois leather. The poles, the hair, which should be cut short at the points of contact, and the skin should be thoroughly wetted with a warm aqueous solution of common salt. A dynamo which can generate an electro-motive force of at least 3,000 volts should be used, and a current of between 1,000 and 1,500 volts should be employed. An alternating current, with alternations not fewer than 300 per second, allowed to pass for from 15 to 30 seconds will secure death.

Circumstantial Evidence in Poisoning Cases.

This is a paper by John H. Wigmore, Esq., of the Boston Bar, who commences it with three propositions which are involved in proving a charge that the accused killed the deceased by poison.

1. That the deceased died by poison.
2. That the poison was administered by the accused or by his agency.
3. That the accused foresaw the harmful effects of the substance given.

The first proposition is the most important, for, unless the deceased died by poison, it is not necessary to inquire who poisoned him. There are only two ways by which death from poison can be proved, viz.: "(1) By the results of analysis of portions of the body, or of substances, a part of which has been known to enter the body, and (2) from the observed symptoms and appearances both before and after death." Testimony as to these is circumstantial evidence, because an inference is necessary to bridge the gap between these facts and the fact of death by poison.

The next step is to prove that the poison was administered by the accused. Practically circumstantial evidence is alone available. There are four groups of facts which form a chain of evidence: "(a) Previous possession of the poisonous substance; (b) opportunity of administration; (c) antecedent possibility or probability; and (d) impossibility or improbability of administration by other agencies."

Thirdly, it must be shown that the poison was administered by the accused, and that he knew its probable effects. This is not an important issue, as a rule, for the evidence that proves the second main fact will serve to prove this one. There remains another important class of evidence bearing on the general question of guilt, viz.: "(1) Oral or written admissions of guilt, and (2) conduct pointing towards a

consciousness of guilt." The divisions above given are then analyzed, and it is shown that it is necessary for the prosecution that each one of the facts (*a, b, c, d*) should at least not be impossible. If the prosecution brings forward complete evidence upon three of the points, while the evidence on the fourth is equally balanced, the mind will have "no difficulty in reaching a conclusion upon the remaining evidence and in inferring the existence of the main fact." If, however, the evidence upon three points is incomplete, then it will hardly be possible to infer guilt.

There are several interesting articles in the "Journal of Nervous and Mental Disease."

"Two Additional Cases of Hereditary Chorea" is the title of a paper by Dr. Wharton Sinkler. Hereditary chorea differs from ordinary chorea in that (1) it rarely occurs before middle age; (2) it never ceases spontaneously; (3) when fully developed, it wants the paroxysmal character.

Huntingdon, who read a paper before the Academy of Medicine at Middleport, Ohio, in 1872, was the first to draw attention to the disease. He stated that he had seen a peculiar form of chorea in Long Island, which was hereditary, incurable, likely to be complicated with insanity, and never occurred before thirty years of age. Two choreic families are reported by Dr. Sinkler, in which there were eleven males and fifteen females in a total of 26 cases, so that sex exerts little influence on the disease.

The character of the movements is markedly like ordinary chorea, but are not so violent, and the knee-jerk in the form of chorea under consideration is exaggerated, instead of being lessened or absent. No autopsies have been made which throw any light on the pathological anatomy of the disease, but the mental complication and the persistent and gradually increasing movements point to some structural disease of the brain. Treatment by medicines seems to be of little use; our attention should be directed to preventing the onset of the disease. When the age at which the disease is likely to appear approaches, the patient should be placed under such hygienic conditions as will guard against excitement and mental strain.

A Contribution to the Study of Muscular Tremor.

Dr. Peterson deals in this paper with "the finer pathological motions known as muscular tremblings or tremors, such as are found in hysteria, neurasthenia, multiple sclerosis, paralysis agitans, morbus Basedowii, senility, and in poisoning by lead, alcohol, tobacco, etc."

The theory that the coarser oscillations of eclampsia and chorea are due to explosions of force in the cortical cells of the motor areas of the brain is generally accepted, but what is the origin of the finer tremors? As regards the physiological action of muscle through the mediation of the nervous system, Weber has shown that a continued voluntary contraction in man consists of a series of single

contractions rapidly following each other. Horsley and Schafer have demonstrated that these contractions, whether natural or not, are caused by impulses from the central nervous system along the motor nerves, discharged rhythmically at the rate of ten per second. The researches of various observers into the voluntary and pathological contractions of muscle are referred to, and the author proceeds to give the results of his own observations which were made with the Edwards sphygmograph. He believes that the tremor present in paralysis agitans and in fear is due to vibratory contraction in the cerebral cortex, and that the tremor found in multiple sclerosis is best explained as being developed from the motor areas of the brain; the jerky character being ascribed by Charcot and Gowers to resistance to motor contraction at sclerotic foci, and by Stephen to resistance by sclerotic changes in the optic thalamus. Dr. Peterson surmises that all tremors, save those fibrillary in character, are generated by intermittent motor impulses from the grey matter of some part of the central nervous system. The paper is illustrated by tracings of tremors taken during ten seconds in the nervous diseases before referred to.

Method of Preparing Brains and other Organs for Anatomical and Pathological Demonstration.

This is an important communication by Dr. Blackburn, and will be interesting to all those who wish to preserve brains in the best possible manner. The material used was "Japan wax," which is soluble in chloroform, benzole, and xylol. The brain is carefully hardened in Muller's or Erlicki's solution, which preserves its size and shape as perfectly as possible. After hardening for about five weeks in Muller's, or a shorter time in Erlicki's fluid, the specimen is removed, washed, placed in dilute alcohol, and gradually advanced through alcohols of increasing strength, until absolute alcohol is used. When thoroughly dehydrated by the absolute alcohol, it is placed in a saturated solution of Japan wax in chloroform, and allowed to remain until the alcohol is displaced by the chloroformic solution. The brain is then transferred to a bath of melted wax and kept in it at the boiling point until thoroughly infiltrated. When the infiltration is completed, the specimen is removed, the wax drains from the surface, leaving it smooth, and when cool it may be varnished, and then painted or lettered if desirable.

If the wax cannot be kept melted continuously, it is better to lift out the specimen and replace it in the chloroformic bath, as the wax has a tendency to crack when cooled in large masses. The cracking may to some extent be prevented by mixing paraffin with the wax. As to the time required for the different steps of the process, much will depend upon the size and character of the specimen, but after thorough dehydration, a hemisphere should be allowed to remain at

least three days in each bath. Dr. Blackburn says that specimens thus prepared are more durable than wax models.

Case of Probable Tumour of the Pons.

Dr. Mary P. Jacobi reports the case of a child, aged ten years, with diffused motor disturbances, preservation of faradaic contractility, gradual enlargement of the head, moderate apathy of expression and disturbance of the intelligence, spasm of right external rectus, and double optic neuritis. She is of opinion that there is a tumour in the pons, because convulsions, marked or definite symptoms, monoplegic spasm or paralysis, hemiplegia, symptoms in the sphere of the motor oculi, headache, nystagmus, and vomiting are absent. The cerebellum is excluded on account of the development of motor paralysis, in addition to the original motor inco-ordination. The general march of symptoms, the bilateral character of the paralysis, the inco-ordination, and the absence of anæsthesia and pain have been observed in slow-growing tumours of the pons.

2. *Dutch Retrospect.*

By J. F. G. PIETERSEN, M.D.

The Dordrecht Asylum Report for the Year 1888.

Dr. F. M. Cowan, the senior physician, gives in a pamphlet of 112 pages the annual report of this institution for the insane, and includes in his publication a detailed account of the administration, as well as an elaborate *résumé* of the mental condition of the patients admitted and the post-mortem examinations conducted during the past year. He makes the same complaint to which we have constantly been treated in most of our own asylum reports, want of space and the difficulty in finding accommodation for the ever rapidly increasing insane population. The provision for 1,800 lunatics, out of a population of 911,534, for Southern Holland he regards as wholly inadequate. "It would," he says, "be worth our earnest consideration whether these old and decayed members of asylums, who require nought but good and careful supervision, could not be established in separate localities or habitations, such as almshouses, etc.;" acute cases and recent admissions, he holds, would thereby greatly be benefited, both with regard to accommodation and treatment. He next makes allusion to a series of weekly nursing lectures which, since October, 1888, he has introduced into this asylum, and already, at the date of his report, he speaks highly of the admirable results he has obtained by such a course. His asylum attendants have by his efforts been enabled to become thoroughly acquainted with the contents of Billroth's "*Die Krankenpflege im Hause und Hospital*," Florence Nightingale's "*Notes on Nursing*," and the "*Handbook for*

the Instruction of Attendants on the Insane," prepared by a sub-committee of the Medico-Psychological Association, text books which have formed the basis of his lectures. Massage has also largely been used, and he dwells on the possible employment of this means in the future as a method of cure; already has he found massage of the abdominal walls of value in the intractable constipation met with among the insane. The number of admissions for the year was 36—26 males and 10 females. The number of patients resident in the asylum was 200. The deaths were 13 (or a percentage of 6·5 of the number of inmates), and were mainly due to phthisis pulmonalis. He gives an elaborate series of tables dealing with the social status, religion, occupation, age, education, causation of mental affections and relapses of the admissions for the year, and a like list with regard to the deaths and discharges. Electricity, in the ordinary method, and as electric baths for suicidal cases, has been employed with varying result; and regarding Franklinisation, he gives as the results of his experiments "that while various patients experience an agreeable feeling of relief and improvement when under a positive current, the reversion of such induces a feeling of oppression and aggravation of their symptoms." In one case included in his clinical list, the galvanic current, both positive and negative, induced a return of aural hallucinations which had been absent for some time. Bronchitis appears to have been especially prevalent, ten per cent. of the inmates classified in his table of incidental affections having been subject thereto during the year. A successful operation for the removal of a large lipoma and a fractured radius were the only noteworthy surgical occurrences. With regard to the weight and weighing of patients, he makes some valuable observations, which our own asylum superintendents might with advantage take into consideration. The simple periodical weighing of patients can serve only one good end, namely, the insight it gives us as to the proportionate decrease or increase in weight of each individual patient. To establish a true proportionate relation between individuals when taking into consideration their body weight, we must, as was pointed out by Dr. Stephenson in the *Lancet* (Vol. ii., No. 12, 1883), take into account the height and rate of growth in man. Now, this co-efficient of weight, as he calls it, is expressed by the formula $\frac{L^2}{G}$ (where L = height, and G = weight), and the formula was obtained by observing that during growth the weight increases in direct proportion to the square of the body length. This co-efficient of weight would be a far more valuable comparative quantity than the mere body weight minus any note of the body length. The number of recoveries was 12 (or 6 per cent. of the total number of inmates), those discharged not recovered nine (or 4·5 per cent.). The rest of the report deals with the detailed account of the mental and physical condition of the admissions, and the post-mortem examinations. Among the former the most interesting case was that of a young woman (æ. 23) suffering from

delusional mania, with hallucinations of sight and hearing, who was subjected to hypnotism about one month after her admission. To quote Dr. Cowan's own account of the case: "She was brought into the hypnotic state for the first time on August 3rd, and within twelve minutes she was in a fit condition for suggestion, by which it was intimated to her that the following night her sleep (which had been broken and disturbed) would last no less than nine hours, and that she would be freed from her nightly visual hallucinations. Success attended this first experiment, for her sleep was deep and refreshing, but during the half-hour preceding it she was still subject to the visual hallucinations. Encouraged by this favourable result, the hypnotic state was re-induced, and the absence and disappearance of her hallucinations were suggested; it was only, however, on August 12th, after eight experiments, that she communicated to us the fact that she no longer saw visions, etc., in the dark, and that the voices were becoming indistinct, but on the other hand there was an increase in the 'unintelligible mumbling and whispering' she was subject to. From that date she was hypnotized thrice a week, and suggestion employed. Up to August 30th the 'whispering' continued, but on that day it also disappeared; and so terrified was the patient that these 'nasty voices' would return, that she begged for a continuation of the experiments. From the 2nd of September to the 30th of that month she was hypnotized for suggestion twice a week, after which latter date they were wholly discontinued. The total number of experiments was twenty-eight, and to test the value of this method no other medicament of any kind was employed." Sulphonal, employed in a case of acute mania, was unsuccessful in inducing sleep after the first night; no other experiments appear to have been made with this drug. The most noteworthy of the post-mortem examinations was that of a girl (æt. 20), who for fifteen years had been subject to attacks of hystero-epilepsy. Here there was found sclerosis and diminution in size of the left pes-hippocampi, some œdema cerebri, diminution and anæmia of grey matter of the cortex, gyri atrophied. Sommer's theory of the association of sensitive aura with sclerosis of the cornua ammonis was not verified in this case, but the fact that the patient died of pulmonary phthisis gives support to the opinion urged by Grasset (*v.* "Brain," Vol. vii., "The Relations of Hysteria with the Scrofulous and Tubercular Diathesis," and his "Traité pratique des maladies du système nerveux," Ed. troisme., p. 977) as to the connection between nervous affections generally, and especially hysteria and tuberculosis. In commenting on the religious instruction of the insane, he urges the necessity of care and tact on the part of ministers attached to or visiting asylums, and the knowledge they should possess of individualizing their instruction. "Religion," he says, "deals not entirely with threats and punishments, but gives also a due promise of reward for those brave of spirit. Who could be so lacking in knowledge of his fellow-man—nay, more, who

could be so barbarous as to demonstrate to some self-accusing melancholiac the gloomy and severe aspects of religion, and to debar from his gaze the bright and hopeful lights thereof?" How many ministers of the Gospel have we in our own asylums who can with truth aver that they study the mental condition of those under their care? They deal out, it is true, weekly or daily instruction in their services and visitations, but they generalize such instruction; they speak to a body of hearers who oftentimes, as we ourselves have witnessed, obtain anything but consolation from the doctrines impressed on them. The patients appear to have been well employed and well amused, and consequently isolation and restraint have seldom been resorted to. According to the tables, 55 per cent. of the inmates were employed on an average daily in various forms of work, a result that speaks volumes for the admirable administration of this institution. We miss from this report any statement as to the expenditure per patient, an item which would have been of much value for comparison with our own asylums. The number of attendants (15 male attendants to 105 patients, and 13 female to 95 patients) appears small, but we suppose in cases of urgency drafts are made from the number of artisans, etc., employed, which is, for so small an institution, exceptionally large (21 in all of various callings). We cannot close this review without complimenting Dr. Cowan not only on his admirable and systematic report, but also on the evidently satisfactory condition into which he has brought the working of his asylum.

Report of the Meerenberg Asylum for the year 1888. Dr. C. J. VAN PERSYN. *Report of the Utrecht Asylum for the year 1888.* Dr. A. T. MOLL.

The acquisition of some useful information is eagerly anticipated by every one of us, and thus the annual publication from the pen of Dr. Van Persyn is welcomed and read with pleasure. The report of one of the very few satisfactory asylums in Holland cannot but be regarded with a feeling of deep interest. The new building by which the Meerenberg institution has been extended and enlarged was put into use in the latter half of last year, when the first transfer of twenty male and as many female patients from the old to the new section of the asylum was effected. The removal has gradually proceeded, while, in addition, fifty patients were transferred thence from Medemblik. The number of inmates has thus gradually increased, and Dr. Van Persyn reiterates the sinister foreboding that at the end of the current year we shall once more be face to face with the problem of overcrowding. Again must we draw attention to the error which has led to the erection of a limited and circumscribed mass of buildings, extension of or addition to which is always most difficult, frequently impossible. Had the block or cottage system been adopted in its place, it would always have been possible to have increased the

number of such cottages, etc, whenever increase of space was demanded. Accepting the fact that 2 per 1,000 of the populace is affected with insanity, and that the population of North Holland is estimated at 750,000, it was to be anticipated that a number of beds amounting to 1,200 should be deemed inadequate. That the inmates of the new section necessitated an increase in the number of the nursing staff, and that much effort was expended in finding suitable persons for this office, are facts referred to on p. 5 of the report, where he says :—"All these inexperienced hands gave a good deal of trouble ; many of them have already been discharged." The closure of the public thoroughfare between the downs and the Meerenberg valley must be considered a great improvement. It was a serious inconvenience always to be overlooked by a curiosity-loving public, while the advantage accrues, as Dr. Van Persyn points out, that an extension of exercise ground is thereby afforded the patients. . . . Such of us as appreciate the doubtful blessings of the Lunacy Act of 1884 (Holland), and who know how to deplore the reckless waste of ink expended on useless clerical work, must with satisfaction note the decision of the committee in increasing the salary of the staff for their extra labour. The remarks on p. 48 regarding alcoholic abuse as a cause of psychic disturbances are important, since twenty per cent. of the admissions are included under this category. The further report, moreover, of these patients is by no means a hopeful one. Dr. Van Walsem contributes to the report an admirably handled article on Dementia Paralytica (General Paralysis of the Insane), which will be read with much interest (pp. 51-59). It shows Dr. Van Walsem to be a follower of the doctrine which Jendrassik has endeavoured to promulgate, namely, that tabes dorsalis and general paralysis are identical affections dependent on an involutionary atrophy of the cerebral cortex. There is undoubtedly much that is misleading in this hypothesis as set forth by Jendrassik, and while Dr. Van Walsem demonstrates facts which demand explanation from Jendrassik in the light of his theory (such, for instance, as the fact that the decussation between the posterior and postero-lateral columns of the cord and the cortex cerebri remain intact), he wisely implicates himself no further than by merely declaring in favour of this novel doctrine. At p. 66 he returns to this question where he endeavours to demonstrate by this theory the presence of locomotor ataxy, but fails post-mortem to find any cord degeneration whatsoever. Many readers will hardly coincide with the view taken on pp. 68-72 in classifying the case there cited as one of mania, but the author no doubt has experienced the difficulty we all have encountered in including all mental affections under a fixed categorical classification. A contribution such as the above is instructive, not only in that it raises the question of classification of a set of complex symptoms, but also exemplifies the difficulty and doubt we shall always feel to which section to allot any given disorder, so long as psychic disturbances do not allow of official

classification. This valuable contribution to the treatment of the insane in Holland concludes with an allusion to religious service and instruction, physical care, modes of amusement, and methods of restraint.

Dr. Moll has done good service to the readers of his report by, as he notifies in his prefatory remarks, combining the post-mortem account with the clinical report of each case. The nursing staff appears still to suffer from change—at least the author makes this representation, with, at the same time, the complaint that the vacancies cannot be filled up so easily among the female as among the male attendants. One must be an alienist to appreciate to the full what a painful sensation is experienced by an attempt at suicide such as is described on p. 25. Fortunately the attempt was in this case frustrated. Dr. Moll also makes complaint of overcrowding. For the nonce it would appear that some relief might be found for this evil in the advantage offered by the Groningen contracts, but this would be but a palliative measure, applications will again and again have to be rejected. When shall we in Holland experience that it is necessary properly to provide for the treatment of our insane? The communicated clinical reports are well worth reading. The most important features of the medical history are notified in short and succinct terms, following which comes a brief history of the affection, while in sundry instances the author embellishes these with his remarks and observations. Especially of interest are the cases mentioned on pp. 33 and 37. Regarding the first-named, it is much to be regretted that no notes of the post-mortem could be communicated (the patient died out of the asylum), seeing that it is highly probable that this was no typical paralytic affection, but the proof is unfortunately wanting. On p. 43 Dr. Luchtmans has communicated *in extenso* the course of a post-partum psychosis, aggravated by typhoid symptoms (wherein the temperature rose to 104° F., and the pulse ran up to 150 per minute), incontinence of urine and fæces and delirium. The case resulted in perfect cure after six months' residence in the asylum. From the same observer we have also a description of a case of catalepsy in a patient with marked hereditary predisposition. Dr. Luchtmans evidently waxes indignant over the unsatisfactory information supplied regarding some of the patients, as well as over the indifference with which relatives and friends sometimes regard the most important symptoms. To hope for aught to the contrary will, it must be feared, be only a waste of energy. A contribution to the complication of cardiac affection with mental disturbance is given by the author on p. 70, and a post-syphilitic psychosis on p. 71. On p. 73 Dr. Timmer gives a biographical sketch of a patient in whom without doubt a perverted education had formed one of the links in the chain of psychic disturbance from which he was suffering. A case of mania, alternating with stupor, and later on with furious excitement, and resulting after two and a half years in

recovery, and a case of epilepsy in which psychic disturbance frequently took the place of the ordinary seizure, are also dealt with *in extenso*. Another interesting case is that of a general paralytic, so diagnosed, but in whom all the symptoms disappeared with subsequent complete recovery. He was admitted on March 19th, 1888, and became convalescent in one month, while on June 18th, 1889, or after 15 months' residence, he was deemed sufficiently recovered to be discharged. Was this a case of true recovery, or was it one of those forms of general paralysis in which widely intermittent remissions occur? An anomalous type of the progress of a case of general paralysis forms the last clinical picture of this series.

Both reports can earnestly be recommended for perusal to such as take an interest in asylum management. One word more as to restraint, mention of which is made in both reports. An English writer, Sankey, says: "If the practice lingers in any establishment still, it is a proof, I consider, of incompetence. Non-restraint has gradually spread where the physicians are the most enlightened." When we accept this dictum of our British colleague, each one of us who has the pleasure of knowing Drs. Van Persyn and Moll must draw the deduction that no mechanical restraint is in vogue either at Meerenberg or Utrecht, and so we find it. At Utrecht Asylum only was the strait-jacket employed—once for a man for surgical reasons, and once for a female patient. I recall to mind a conversation I had with a restrainer as to non-restraint. When it was urged by me that non-restraint was certainly capable of being carried out, since at Meerenberg no need apparently existed for strait-jackets, he replied that it was very easy to say that, but it would perhaps be as well for me, by actual observation for a month or so, to convince myself that the assertion was strictly true. Arguments of so abject a nature it is naturally useless to combat. No cases of suicide happened either at Meerenberg or Utrecht during the year.

3. *French Retrospect.*

By D. HACK TUKE, M.D.

International Congress of Mental Science.

We abridge from the "Annales Medico-Psychologiques" (Sept., 1889) M. Ritti's notice of the International Congress of Mental Science, which held its meetings at the College of France, Paris, from the 5th to the 10th of August, 1889.

It will occupy a very honourable place in the history of psychiatry during the latter part of this century. By the number of its adherents, French and foreign—in number more than one hundred and sixty—by the interest of its works, by the importance of the resolutions

which have been carried, this reunion, where the mental doctors walk hand-in-hand with magistrates and administrators, equals in importance those of the same kind which one has attended for the last five-and-twenty years.

MM. Calmeil, Delasiauve, and Baillarger, who were elected Honorary Presidents, were the last representatives of the generations which have preceded us, veterans of our special science, still full of life and scientific activity, and who have contributed so much during many long years to the progress of our specialty, and who still interest themselves so warmly in its new conquests and its continued progress.

The Congress of 1878, so remarkable in every respect, both for its organization and its results, has served as a model for that of 1889. There exists, however, a very marked difference between the two meetings. In 1878 questions of legislation and administration took precedence over scientific questions properly so called. During its eight sittings, four and a half were given up to the former and three and a half to the latter questions. In 1889 the proportion is more than reversed. During its nine sittings, seven have been completely taken up with communications of a scientific nature, and two only have been employed with the reading and discussion of papers relating to the legislation and public maintenance of the insane.

Mental maladies, from a clinical and therapeutic point of view, have taken precedence over other practical questions. Here, we believe, is the characteristic of the Congress of 1889. Is it necessary, then, to conclude that the new generation of mental physicians who have taken such an active part in our sittings, do not interest themselves with problems which are raised by the legislation and public maintenance of the insane? We do not think so. This new generation, smitten with the scientific side of psychiatry, believes—and with reason—that the solution of these problems will be rendered easier by a more profound knowledge of the pathology of insanity, by a greater precision in the diagnosis and prognosis of mental diseases, and, above all, by the therapeutics of these affections, both moral and physical. And, in fact, this is logical reasoning. Does not a new discovery, transforming the methods of treating lunacy, sensibly influence the actual methods of organization in our lunatic asylums?

Has not every important acquisition in the domain of pure science its counterpart sooner or later in that of practical science?

The Congress has passed several important resolutions; propositions have been adopted which cannot fail to bring about the most happy results from our special point of view. Thus, from the first, a vote was passed for "the foundation of good international statistics of mental diseases." The scheme presented by our learned Belgian colleague was accepted after a short discussion. This success was mainly due to our distinguished colleague, Dr. J. Morel (of Ghent), whose thoughtful report was well received. From the numerous

classifications which have been sent from all parts to the Belgian Society of Mental Diseases, M. Morel has been able to draw up a species of classification for statistics; he has set aside those points upon which opinion was divided, only retaining those upon which the majority was unanimous. The following grouping is the result of this delicate work :—

- 1st. Mania (comprising acute delirious mania).
- 2nd. Melancholia.
- 3rd. Periodical insanity (*folie à double forme*).
- 4th. Progressive, systematic insanity.
- 5th. Dementia.
- 6th. Organic and senile dementia.
- 7th. General paralysis.
- 8th. Insane neuroses (hysteria, epilepsy, hypochondriasis, etc.).
- 9th. Toxic insanity.
- 10th. Moral and impulsive insanity.
- 11th. Idiocy, etc.

This classification (although the word classification is too ambitious) attains, we believe, with the majority of our colleagues the end in view. The principal forms of madness are here represented, and if it is adopted by the “bureaux de statistique” of the different countries, if it is employed by all the mental physicians, the *collaborateurs* will possess in the course of some years a series of very useful documents which can be compared with one another, and which will allow them to arrive at more certain conclusions in their researches.

Another resolution not less important has been adopted. A very interesting discussion followed the reading of M. Christian's excellent paper on “Syphilis and General Paralysis,” and on the learned memorandum by M. Mabilie, on “Secondary Cephalic Meningitis in Cerebral Syphilis.” Very marked differences of opinion were manifested on this delicate point of etiology. The partisans and adversaries of the relation of causality existing between syphilis and general paralysis were heard one after the other. M. Gilbert Ballet brilliantly resumed the debate, and finished his discourse by proposing an international inquiry, whose documents should be brought together and examined with care, and which would do more to determine the question than all the academic discussions. This proposition was adopted with acclamation by the members present; it was sent to the Medico-Psychological Society of Paris, which is charged to institute an inquiry, to put itself into communication with all the foreign Societies of mental science, and to bring the documents together.

The Medico-Psychological Society will have the honour of taking the lead in this very delicate task.

The resolutions taken by this Congress are six in number, all relative to the questions of legislation and administration. They are the following :—

- 1st. M. Semal, of Mons, in his remarkable paper, “Folies Peni-

tentiares," endeavoured to show that it is not the detention, cellular or otherwise, which ought to be considered the cause of the madness of the prisoners. It is in the moral personality of the delinquent, hereditary or acquired, that the cause of the madness should be sought for, the seclusion being only an occasional factor.

Our learned colleague has arrived at this conclusion after an inquiry which he has been able to make in the Belgian prisons. He asked that this inquiry should be followed up by every country, and he proposed to the Congress to have the kindness to pass the following resolution :—

The international Congress of Mental Science held in Paris, acknowledging the scientific interest which attaches to the question of prisoners' madness, proposes this resolution : "That an inquiry shall be officially instituted to this effect, and that the results shall be the subject of a special publication." (Carried.)

2nd. The report (in which Professor Ball, in collaboration with M. Rouillard, has studied with much care and criticism the subject of comparative legislation on the location of the insane in special establishments, both public and private) gave rise to a remarkable debate, to which we shall have again to refer, only mentioning amongst those who took part M. Barbier, First President of the Court of Appeal, M. Falret, M. Bourneville, and other French members ; and amongst foreign members, MM. Bourque and Taguet (Canada), Vassitch (Servia), and Soutzo (Roumania). The latter terminated the discussion by asking his colleagues to vote for the following proposition :—

The Congress, having heard the report of Professor Ball and the communications made on this subject by the foreign members, proposes the resolution : "That each state should have a special law with regard to the protection of the interests of the insane and to submit the patients to a scientific and rational treatment." (Carried.)

3rd. M. H. Monod (Directeur de l'hygiène et de l'assistance publiques de Ministère de l'Intérieur) has just communicated to the Congress the results of the inspection which he has made in certain hospitals and asylums of the departments on the state of the temporary cells where the insane are confined before they are transferred to special asylums.

In this remarkable communication M. Monod drew for us a most lamentable picture. One cannot sufficiently congratulate him for having dared to lay bare such a sore. In his conclusions, inspired by the highest sentiments of philanthropy, he asks the Congress for their aid in healing it. The latter unanimously passed the resolution that public authority, whether by legislative or administrative means, shall oblige the Councils and Committees of asylums to put a stop to such a state of things.

4th. The question of the programme in legal medicine was the responsibility of dipsomaniacs. The competence of M. Motet in these delicate matters has long been known ; thus it will appear superfluous

to eulogize the excellent report which he has made in collaboration with M. Vétault. His paper was very well received, as it deserved to be, but a definite conclusion was wanting in the form of a resolution. Thus M. Motet himself drew up the following, which was unanimously adopted :—

The Congress, considering the danger with which intemperance menaces society, the family and the individual ;

Recognizing that there is need for establishing distinctions between simple drunkenness, pathological drunkenness and its varieties, and chronic intemperance ; passes the resolution

That in the interest of social defence, judiciary measures on the one hand, and lasting administrative measures on the other hand, shall be taken against dipsomaniacs according to the category to which they belong.

That the legislative powers shall sanction the works of Claude des Vosges and MM. Th. Roussell and Léon Say.

That it may be provided, by the establishment of one or more special institutions for the confinement of habitual drunkards, dipsomaniacs who have committed crimes or misdemeanours and have benefited by the law of "non lieu" by reason of their mental state, that the duration of their confinement shall be determined by the Courts after a medico-legal inquiry ; that the discharge of the patient can be adjourned even at the expiration of the fixed time if the dipsomaniac is legitimately known to be likely to have a relapse. That chronic harmless dipsomaniacs shall be able to be maintained in lunatic asylums.

That these establishments, having the character of asylums for treatment rather than for repression, shall be organized with severe discipline, and that work shall be imposed therein.

That the judiciary and administrative statistics shall be drawn up in such a manner that the results of these measures shall be manifest.

5th. The last sitting of the Congress was essentially set apart for the papers of MM. Baume and Taguet upon the assistance of the insane and the agricultural annexes of the asylums for medical treatment. Upon these questions, as upon so many others, it is evident that if there is agreement as to the principles there is a difference of opinion as to the method of applying them. Thus the latter have been put on one side, however fascinating they may have appeared in our learned colleagues' communications, and the principles were voted for whilst passing a resolution that further extension shall be given to Societies for the assistance of the insane who have left asylums and for the agricultural annexes of asylums for medical treatment.

6th. Lastly, with reference to the reading of the paper of M. Rouillard ("Some Considerations on Insane Criminals from a Medico-Legal Point of View"), the Congress renewed the resolution adopted by the Congress of 1878 relative to the establishment of special wards or asylums for the criminal insane.

Lastly, we may, perhaps, be permitted to propose a resolution in our turn. It is that these international meetings of mental physicians shall become more frequent. We should thus be better able to bind those relationships more closely which are barely outlined by a week

of work in common, and labour more fruitfully for the progress of those studies which are dear to us, and for the amelioration of the fate of those unfortunate beings who are the objects of our solicitude.

So far M. Ritti. We hope to utilize in future numbers of the Journal some of the valuable materials which the Congress had before it.

4. *Austrian Retrospect.*

By A. R. URQUHART, M.D.

Criminal Anthropology, being a digest of the writings of Professor Benedict, of Vienna.

(Continued from Vol. xxxv., p. 281.)

I have sub-divided mankind into the following classes according to his moral condition, in order to understand the relations of the abnormal:—

- I. Homo nobilis.
- II. Homo typicus.
- III. {
 - A. Homme canaille.
 - α. Brutal.
 - β. Perfidious.
 - B. Homo vitiosus—moral neurasthenia.
 - C. Homo criminalis.
 - α. Homo criminalis—with normal disposition.
 - β. Homo criminalis neurasthenica—professional criminals.
 - γ. Homo criminalis—from disease or intoxication.
 - δ. Homo criminalis—degenerated.

I. HOMO NOBILIS.—The type of this class is the Sage of Nazareth. The mirror which the Homo nobilis holds up to society shows its mental and moral infirmity. Nowadays, the punishment of the mentally advanced and purified is not scourging of his body, but contempt for his views and conduct.

II. HOMO TYPICUS.—This category comprises the great majority of mankind, who, on the one hand, draw back from the boundary line at which greatness of mind is threatened with a martyr's crown; and, on the other hand, from that lower boundary line of ethics, at which the law keeps watchful guard. Of course, passion, despair, and other causes may force men from this group into the arms of criminal justice.

III. A. HOMME CANAILLE.—This sub-division of the third class comprises men of low ethical standing, but protected by power, or wealth, or talent. They know how to take advantage of human qualities for their own benefit, and possess a stubborn egoism and

unscrupulousness. I have not been able to fit a Latin name to this group.

B. *HOMO VITIOSUS*.—This is the second sub-division of the third class, and here also the criminality is compensated. There is usually a characteristic moral neurasthenia, or the individuals are depraved by example or education. These conceal their criminal behaviour, or render it unassailable and unpunishable.

C. *HOMO CRIMINALIS*.—In this last sub-division of the third group appears the *Homo criminalis*—the “*Uomo delinquente*” of Lombroso, and it may be again sub-divided into four classes—the criminal with normal disposition, the neurasthenic, the diseased, and the degenerated.

The best insight into the psychological nature of man is obtained by two methods. The first investigates the *historical* development of mankind—the development of the ethical, mental and æsthetic qualities, how these individual improvements are broadened and made universal, how they are imposed upon all by laws and institutions, and thus become common property. Thus we are taught that the vices of egoism are primary, while those sentiments which owe their existence to the fact that man is a social being, are only developed gradually. The second method is *biological*, in so far as it teaches us to recognize the structure and functions of the brain—the outer and exact cast of which is the skull. Modern science has begun to translate the language of psychology into the language of physiology; and to study without reference to metaphysics the laws of action of the psychical processes which are confirmed by the science of statistics.

What positive results, then, have been attained by the criminal-anthropological school? Have these results a direct, practical value, and can they be incorporated with the practice of law? The most important outcome of these methods is the mode of observation and the unprejudiced nomenclature. The chief question of criminal anthropology is whether the conformation of the skull gives any indication of a possibly changed organization of the individual. This offers great difficulties. There is no sufficient material at hand; for anatomical collections mostly contain skulls of degenerated individuals, such beings in general as have failed to raise themselves, even to a modest height, on the ladder of life. Notwithstanding, it is found that the skulls of criminals are always furthest removed from the accepted type. But we have to assume a very great typical breadth, and the results of these investigations must be received with great caution, for very pronounced phenomena of relapse into the world of lower animals may occur, and may be devoid of psychological meaning. Thus, an abnormally massive development of the facial skull is, I suppose, of much more common occurrence among those who commit crimes of violence than among normal men. Yet such excessive development

will be without psychological significance if, at the same time, the cranium and brain are properly developed. Abnormal forms are of no consequence if they are only the manifestations of compensation. Nature thus averts the threatened danger of a partially wrong formation of the brain.

The phenomena of craniometry are but rarely perfectly unambiguous. In general, there is no special anthropology and no special craniology of crime. An abnormal state of the skull, however, indicates an abnormal or defective psychological development, and it is an established fact that the capacity of the skull is deficient in criminals. This corresponds with the data of descriptive psychology, which informs us of more facts having their source in inferior development than in perversity. The question arises—is any given case an individual with an actively abnormal development, or with a predisposition to abnormal cerebral activity, or to cerebral diseases, or is he a member of an affected family? According to my experience, members of an affected family show quite the same irregularities as criminals.

My book of “Anatomical Studies on the Brain of Criminals” contains no anatomical characterization of the criminal brain. I have, indeed, proved from the study of these brains that the hitherto authoritative school type marked by disconnected sulci does not exist. It is merely an ideal, representing one extreme, while the other would be indicated by a type of brain in which the sulci usually communicate with one another. This proposition has now met with universal confirmation, especially by the researches of Giacomini. I have specially emphasized the fact that certain confluences of the sulci in the brains of criminals examined by me are incomparably more frequent than in the normal state: and, moreover, that these are the confluences, the absence of which is characteristic of the type *homo sapiens*. But these atypic observations were probably and generally made in respect of abnormal and defective individuals, and not specially in respect of criminals. It will be evident that no certain conclusions can be drawn from abnormalities and irregularities of the brain and skull as to actual criminality. These merely mean predisposition: opportunity and social factors must contribute to the criminal act.

Pathological states of the brain preclude the possibility of a normal psychology, and such criminals as sensational murderers and incendiaries must now be regarded as diseased individuals much more frequently than heretofore. That the most frightful criminals are not degraded (*gesunkene*) individuals, but rather predestined to the act, is certainly a comforting fact.

THE CONCLUSIONS at which I have arrived, and which I laid before the Congress at Antwerp in 1885, may be stated as follows:—

1. It is not justifiable, nor is it useful, to confound professional criminals with the insane.

2. In the case of professional criminals there is a feebleness or

narrowness of psychic qualities which renders them ill-balanced. In such a condition the superiority of a normal quality becomes troublesome, for compensatory qualities are deficient or enfeebled.

3. No penalty and no education can correct the vices of these individuals, and this experience proves that they are incorrigible, because diathetic—born such or become such in early infancy.

4. Magistrates would be more just and more useful if they would seek to know if a person is dangerous to society, and if he can be corrected or rendered harmless.

5. The psychology of criminality is linked to normal psychology by the series of accidental crimes. Vice, or an absence of noble sentiment joins a number of normal persons to the criminals.

6. Crimes committed by those in a state of disease or intoxication are to be regarded as accidental. Such a criminal is a pathological individual, and should be regarded as such.

7. Crimes committed by degenerated individuals must be classed with those of the epileptic and the insane by diathesis. The congenital degeneration, or that acquired in early infancy, does not permit of a development of the sentiments and the reason sufficient to maintain the psychical equilibrium in even slightly critical situations.

To sum up the difference between the insane and the criminal, one may say that the action of the latter resembles either a defeat on account of feebleness after a psychic combat more or less excruciating, or a failure on account of the superiority of the intelligence, and the organization of society; while the action of the former resembles either a defeat without possibility of combat, or a failure without calculation of success.

It is significant that the Congress in Antwerp, which met under the patronage of the Belgian Government, passed a resolution that a Committee of Inquiry should be appointed to examine all criminals who are suspected of mental aberration, and to subject to closer study all great criminals and all relapsed criminals. Still more important is the resolution of the Austro-Hungarian Psychological Assembly to demand statistics as to the reception of the mentally diseased into prisons, and to take into consideration whether certain of these were insane before or during the criminal act; to ascertain if criminals are specially predisposed to insanity; to discover if certain ways of executing the sentence favours mental aberration; and what symptoms of disease have been manifested only after the act. Of course a perpetuation of the sentence on insane prisoners is senseless, for the feeling of "atonement" cannot be implanted in them. On the other hand, it is not advisable to set them at liberty, while still less is it justifiable to transfer them to ordinary asylums.

Exact science has shown that many criminals are not possessed of normal mental powers, and the more frequently that it is stated that the crime was committed under an "irresistible impulse," the wider

becomes the breach in hitherto accepted principles of justice. As previously indicated (Vol. xxxv., p. 277), the results of the Criminal Anthropological School can be adopted in the law courts at once, since it is only necessary to free science and the codices from prejudiced expressions. The words "proved dangerousness" should be substituted for the term "guilty." The question then arises whether we have to deal with a normal or an abnormal individual; and, in consequence, for "punishment" must be substituted "treatment," or, if that sounds too pathological, "procedure." The first necessity is the protection of society. If we have to deal with a degenerated individual, there can be no hope of education to a normal state. He is permanently dangerous, and so are the neurasthenic. If the criminal be of a normal disposition, it must be ascertained if the act has been committed during an attack of an acute or chronic nature. The severity of the form of treatment must leave behind it an abundant notion of retardation. For instance, if a murder be committed by a young man owing to passionate jealousy, he will be dangerous from that cause until the period of sexual decrepitude.

The statement of the *psychological equation* is the most important task of the prosecutor and judge. A certain amount of uncertainty attaches to the verdict, for the psychological equation is obscured in various ways, and for various reasons, and the justice of the future will depend greatly upon properly qualified observation of criminals in prisons. The unnatural education of lawyers, which may be compared to that imparted to medical men before the days of clinical instruction, frequently falsifies the psychological equation before the court, and this state of matters must be rectified. But even then the judgment of prison officials will be nearer the truth than that of courts of justice. The judgment of the experts of the future will guide with much greater certainty the proper treatment of criminals whose verdicts require alteration. Proved permanent dangerousness may only be discoverable in prisons, and a too unfavourable sentence may have to be corrected in a more scientific manner than by the usual acts of pardon.

Hearing the clamours raised against the Criminal Anthropological School, one would have expected that its doctrines could only make their way over subverted thrones and smoking ruins of halls of justice. The objection may be raised that these reforms, simple as they are, will not soon be received into legal practice. But the truth will prevail, the judgment of experts will be more and more sought; one will not be abashed in the presence of the proof of an irresistible impulse, nor as a protection place his fist in the eye of the rights of society. Words will not yet be changed; but conceptions will alter, and therewith the judgment. Calamities caused by erroneous scientific beliefs will vanish, according as they paralyze justice, or guide it into wrong courses.

Melius adhuc est iudici, cognoscere corpus et animum humanum, quam cognoscere corpus juris.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The Quarterly Meeting of the Medico-Psychological Association was held at Bethlem Royal Hospital, November 6th, 1889, the President (Dr. Newington) in the chair.

The following gentlemen having been duly proposed, were candidates for election:—William Gibbon, Senior Medical Officer, Joint Counties Branch, Carmarthen; George Stephens Pope, Assistant Medical Officer to the Retreat, York; Joseph Peeke Richards, Medical Superintendent Female Department, Hanwell Asylum; Charles John Sells, Honorary Medical Officer, Royal Surrey County Hospital, Guildford; Robert Vaile Skinner, Medical Superintendent and Proprietor, Periteau House Asylum, Winchelsea, Sussex; and Dr. Ireland Donaldson, Senior Medical Officer, Camberwell House.

The ballot having been taken, the candidates were declared to be duly elected.

The PRESIDENT—It will be in the recollection of members that at the last general meeting the Hon. Secretary was instructed to write a letter of thanks to Sir John Dorington, and to Dr. Farquharson, for the great aid they had accorded this Association in reducing the asperities of the Lunacy Bill in its passage through the House of Commons. Dr. Beach accordingly wrote, and the answers to his letters are as follows. (They were read.)

Paper by Drs. Dodds, Strahan, and Greenlees, on "Assistant Medical Officers in Asylums: their status in the specialty." (See Original Articles.)

The PRESIDENT—I am sure Dr. Strahan has read a most interesting paper, interesting, no doubt, to a great number here, who are in the position of assistant medical officers, and very interesting to those who have been assistant medical officers. I may say, I am very much interested in one piece of information contained in the table laid before us. I find that the gentleman who undertakes the duties that I had some fifteen or sixteen years ago, gets exactly double what I had, therefore we may hope that the spirit of progress is abroad, and that the status of the assistant medical officers will keep on improving. The point that chiefly strikes me in Dr. Strahan's paper is his differentiation between the duties of the senior and junior assistants. I think it is altogether wrong to call the senior assistant by that name; he should be called the deputy-superintendent, because it is not only that he has the higher duties corresponding with his larger experience, but he has absolutely to bear the responsibility of the medical superintendent when the latter is away. We know how very trying this is to men who are comparatively young in practise, and that very question of responsibility would alone, if I had much to do with the matter, induce me to make the position of the senior medical officer, or as he ought to be called, the deputy-superintendent, a more valuable one. As to the question of marriage, I am afraid Dr. Strahan's arithmetic will not serve him there. If the assistant medical officer is already underpaid it will not benefit him much to get his salary doubled if he has to keep two persons out of it. Under some special circumstances undoubtedly it will be a valuable boon, but I should take it, that it would be a dangerous experiment, because when a man gets married in a position of that kind he is very apt to stop where he is, and if he became married as deputy-superintendent there would be a considerable chance of this; he would be more bound by circumstances, his choice of action would be considerably limited, and he would not be able to move at as short a notice as he would were he unmarried. After all I am afraid it will be a very great question

of money whether the senior assistant medical officers may expect any very great increase ; at all events, we may be assured for a few years to come, until a better view of the duties of asylum officers is taken by the people, there will be some difficulty in the matter. There is one little point about increasing the number of asylums by lessening the number of patients in each. I think Dr. Strahan is perfectly right there. It will be a good way of increasing the number of offices, and therefore, the number of officers, by increasing the number of asylums. It is a question that must come sooner or later. It has been debated on various grounds, specially on grounds of treatment, and also as bearing on the question of hospitals for the insane. This is yet another ground for debating the matter from our point of view. I am sure there are many here who have more to say than I have on the subject, and the meeting will be very glad to hear them.

Dr. IRELAND—I was very much interested in Dr. Strahan's paper, and I must say that his appeal was one which we all ought to listen to. At the same time, it struck me it was quite possible one might help the object itself, as it were, by criticizing his position. The object being to increase the emoluments and status of the assistant officers in asylums, it strikes me he has not exactly realized what he wishes. He, no doubt, establishes as a moral consideration that those gentlemen who do excellent work and who are extremely useful should be better paid. It is unfortunate that gentlemen who have such difficult and harassing work, both scientific and administrative, should get such small salaries. But the great majority of us have nothing to do with paying the assistant officers ; that is done by committees of different kinds, who look upon the question from the point of political economy, supply and demand. "Can we get good men for the money we offer ?" If they continue to get good men, and I rather think that they do, then the moral considerations will have very little effect upon their minds. All that could be done to meet that would be for gentlemen who are not satisfied to hold back, so that the number of competitors should be decreased, and their qualifications should not be as good as previously. This was done in the army. For a very long time the medical officers of the army were very much dissatisfied with their position, and they induced the junior members of the profession not to go in as candidates. Any advantage that the army got was certainly owing to understanding exactly that the Government wished to have the best men and would pay the price. I think Dr. Strahan should exhort those who are in the same rank with him to adopt that method, to point out the disadvantages of the position in such a manner that competitors would not come in. I think it is extremely likely that the service is one in which there would be a great deal of competition. If a man wants to go into the army there are a great number of considerations to be taken into account. He has to go to India, for example ; then he has to stand the risk of being killed and wounded, and he has to leave his country, which is felt to be a serious thing for a man. On the whole, there is a certain amount of hesitation in going into a service like that of the army, which hesitation I do not think exists so much with regard to the going into an asylum. Then the position of being an assistant in an asylum is very much of a lottery. A man serves a long time, a great deal longer than he used to do. I have known a few who have served for twenty-two or twenty-four years, and all these things have to be taken into consideration. Then as to the question of scientific work upon which a man's mind may be bent. He finds when he comes under the control of his committee that they do not care a rap about the scientific work a man does. They get him to do some definite work for them, to look after certain patients, and I do not think they care very much whether he spends the rest of his time in going to dinner parties or in looking at sections through the microscope. (Laughter.) Then as to medical officers being allowed to marry. I think myself that it is very hard that a man should have to spend twelve, fourteen, or sixteen years in a very responsible and difficult position and not be allowed all that time to marry. The President says he would, perhaps, get into

difficulties if he did marry, but I think they might be met in different ways, He might get a wife who was able to contribute a little of her own (laughter), and it would be very hard upon a man if in order to obtain this lady he had to give up his own salary, as it were. I have often thought myself one way of benefiting those engaged in the treatment of the insane, at least in the county and borough asylums, would be to make it into a service. This would be the only thing to make it anything like the position in the army and navy. A man goes into the army or the navy; he gets bad pay at first, but he knows he will get better afterwards, and then when he becomes older if he is efficient he gets promotion, and the finest prizes in the army and navy are within his reach. He looks forward to be an Inspector of Hospitals, an Inspector of Fleets. Now, I should say that in considering this matter there are a great number of very meritorious men who, having been shunted into small asylums, some how or other cannot escape from it; they do not succeed apparently in getting into the larger prizes of the profession. If it was possible to turn the whole service into a special one like that of the army and navy there would be not only promotion, but a man would be shifted from a small asylum to a large one, and the appointment of Commissioner in Lunacy would naturally follow at the end for a period of five years or so, one might think, to those who had fairly distinguished themselves in the service. I do not know whether this is practical at present, but it is the only way that I can see to make this specialty of ours a sure and safe one to go into.

Dr. GREENLEES—As one of the authors of the paper may I, on behalf of the assistant medical officers, say that one of our objects is to enlist the sympathies of this Association in this matter. We believe that the Association is capable of giving us great assistance. We also believe that we can do nothing without its assistance in a matter of this kind. We hope that they will kindly grant us that assistance.

Dr. SAVAGE—It always seems to me that this is one of the most important questions for the whole future of lunacy, and I am afraid I have looked upon it from rather another point of view. It seems to me a pity that there should not be more junior assistant medical officers, even if they are not paid at all, or paid very badly, so that a much larger number of men should have the opportunity of being resident at asylums for at least a year, even though they may not intend to devote themselves ultimately to the specialty at all. The fault seems to me that a great many men get there, and then they do not seem to care to move out, and then there is a mass of assistant medical officers, very many of whom have no real interest in their work, but still they stop on, having once got into it. I think it will be very much better if all our asylums have a very much larger number of officers, and I quite feel with our President, who says that the senior assistant would be much better if he were not senior assistant so much as deputy—if, in fact, the first two men were thoroughly well paid, the superintendent and the deputy, and the other men were not, they should be more numerous and more movable. One was struck many years ago in Vienna at seeing the way things were worked, for although I must say one saw things in the wards that were very much like mechanical restraint, yet one saw many points about medical supervision and medical treatment, with regard to which the practice is even now defective in England. For instance, what asylum is there in England where, at all events once a week, the medical officers and the assistant medical officers meet together, and have all the case books before them, and discuss each case upon its merits, and where a line of treatment is definitely fixed upon and worked out by the superintendent and his deputy, to be carried out by the assistant medical officers, just as the clerks in a general hospital would have to carry out the work? If something of that kind could be done it would have an enormously good effect in levelling up the superintendents. Of course, assistant medical officers are, many of them, enthusiastic in their work for a time, but unfortunately the pressure of work, or the desire for the acqui-

tion of superintendentship, may be enough to prevent them from continuing in the work. The officers, be they superintendents or deputy superintendents, should work shoulder to shoulder, the one taking the place of the other. At the same time, it would usually be infinitely better if the deputy superintendent was the organizing head for the clinical work, as practically he is now, though not recognized to be such. In my opinion, I say, it would be a vastly better thing if a very much larger number of men went from hospitals to asylums only for a short time; and, therefore, I should be very much inclined to have assistant medical officers worse paid than they are at present, that is, the juniors, so that they should distinctly look upon it as a position to be held only for a year or two, in order to get experience in this department. In that case the superintendents would be able to select men who were thoroughly fond of that branch of the profession, and who were likely to elevate it. I feel the importance of the proposal, but I must say, having had the experience of a married assistant officer at Bethlem, one must see that it may have its advantages. It seems to me that there are certain assistant medical officers here who have enough at all events to begin life upon, and I should say that a man, if he marries the right sort of wife on £300 a year, the right sort of wife would pretty soon move him out of it—(laughter)—if it was not the best thing for him. There would be then two inclinations to move on, rather than one to stand still. I know that Dr. Needham feels with me that a married assistant medical officer may be a very great blessing.

Dr. HACK TUKE—I should like to say, as a former assistant medical officer—perhaps the oldest in the room in that sense—that my sympathies go a long way with the authors of the paper just read. If it may be said to go in the direction of levelling up, I think the remarks of my friend Dr. Ireland would go in the direction of levelling down. On the whole, it seems to me a very sad state of things to have got to if we have to discourage men from entering into this special service with a view of being assistant medical officers, unless the market is really glutted already. If, indeed, there are now too many men, and there are likely to be for some time, then it is no use advising men to go in for this kind of work. I have myself advised several good men to go into it, and if we have got to the point at which one can no longer do this, I say it is to my mind a very serious thing. If we are agreed, as I suppose we are, that the salaries of assistant medical officers should be raised, every effort should be made to induce the County Councils to increase the salary of at least the senior assistant. Whether they will do it or not may be open to doubt. We can but try. Could not this Association do something? I suppose it is one of the practical objects of this movement to endeavour to urge the new committees in this direction. With regard to the point just mentioned by Dr. Strahan, the size of asylums, I suppose most of us would agree with him, though whether anything can be done practically by our Association I do not know. On the other point, that of endeavouring to increase the salaries of the senior assistant medical officers, by whatever name they may be called, I repeat that I think the Association might do something in the expression of an opinion. Whether this be so or not, I wish to express my sympathy with the intentions and objects of the paper.

The PRESIDENT—Have you any idea, Dr. Strahan, in what form the Association could afford the aid that you hinted at? Have you any resolution to bring forward?

Dr. STRAHAN—I do not know whether it would be wise to go so far at the beginning; it is a big movement, and heavy bodies move slowly. I do not think it would be quite wise to rush the thing by resolution. It is better to let it simmer a little while. Unfortunately there is not a county superintendent present to-night to give us his opinion on the point.

The PRESIDENT—Will a borough superintendent do as well?

Dr. WHITCOMBE—I have had the advantage of being colleague with two of the gentlemen who have been the authors of this paper, and, from my intimate

knowledge of them both, I am perfectly sure that they would not raise a grievance unless they had some ground for it. I had the pleasure of being a colleague with Dr. Dodd for many years, and as an able assistant and a man of great scientific attainments I can speak of him most highly. But I am perfectly sure, sir, that these gentlemen have not brought forward this paper with any idea of making their own case good by depreciating that of their junior assistants. I think, on the other hand, perhaps the idea is more that of levelling up to the superintendent than levelling down to the junior. Every labourer is worthy of his hire, so we are all taught to believe, and there is no doubt that assistant medical officers at the present time, and especially in large asylums, are considerably underpaid for the amount of work and responsibility that they have. As a superintendent, perhaps I might think assistant medical officers were very well paid, but if I look back to the time when I was an assistant myself for a number of years, I think the position of an assistant medical officer is anything but what it should be. Your suggestion, sir, that senior assistant medical officers should be termed deputy-superintendents is an excellent one, and I think a suggestion which it would be wise for this Association to put forward more than has been done. With it I think the increase of pay would go, but I cannot think that because the senior assistant or the deputy-superintendent should be well paid that a junior assistant should not be so well paid for his time and labour. When junior assistant medical officers have all passed their examinations, and look forward to gaining some little towards a livelihood, for a few years at first it is only fair, I think, that they should be paid £100 or £150 a year as junior assistants. My own position as an assistant was certainly not an enviable one, either as regards position or pay. Perhaps I am safe in saying the same even as regards the pay and position of a superintendent, but we have to "Rest and be thankful" for the small mercies we get. I am thoroughly in sympathy with the paper, and I think there is plenty of room for superintendents to improve the positions and remuneration of assistant medical officers.

Dr. HYSLOP—I have only had a short experience in lunacy, but it has been a rather varied one. When, as a young man, I have gone in for the science of the thing, and have taken much trouble in preparing specimens, I have been told, "It is all very well to talk about enthusiasm in sections. Wait till you have been married a few years and you won't be so keen about cutting sections. Now, for my part, I think that a man who has spent a great deal of money in joining the profession, and who has before he is entitled to pension to spend 21 years of his life as assistant medical officer, or deputy-superintendent if you will, having all the medical care on his shoulders—for really he has the responsibility—a man who resides in an asylum for that time should certainly be amply repaid. I know for myself, passing through different asylums, I was not content to stay in one, and, contrary to the advice of our President, who said it would be dangerous to experiment in getting married, I must say that I certainly was very glad when I saw that there was a possibility in such a post as Bethlem, where such a thing could be carried out. I believe there are only four or five asylums in this country where an assistant can get married. While not grumbling with my own position, for I fully appreciate it, I still wish to express my sympathy with others who have really not such fortunate experience.

The PRESIDENT—I am afraid this question is only a branch of a much larger one. The word "service" has been used with regard to the army and navy, and it has also been used incidentally in regard to the asylum superintendents; and it is a question whether, sooner or later, there will not of necessity be an asylum service. On that will depend many other things. The pension question is all part of the same thing, for if there was such a thing as an asylum service the pension question would be settled very shortly—it would smooth the way in every respect. Again, I will revert to the question of pounds, shillings, and pence. If the County Councils can get men to come for the money now paid, it

is their duty to the ratepayers to take them. The expression "market price," of course, is a fallacious one. It is often used, and it is said that an employer should only give the market value of service. What is the market value of service? Put up the Lord Chancellorship to bidding. Why, we could get hundreds of struggling barristers who would go in for £150 a year. That could not be taken as the "market value" of the Lord Chancellorship. And so it is with assistant medical officers. As long as they will go in for any price that is offered, the County Councils cannot be expected to raise the value of the post. There is only one way to influence the County Councils, and that is to show the necessity for valuable work at the hands of the people they employ, and that can only be done by hard work and by showing the value of, and the necessity for, the knowledge that is required towards fulfilling the duties and towards saving the ratepayers' money. This is the only way we can look at the question. Of course if our calling were a trade low salaries would very soon be stopped by striking, but as it is a liberal profession we cannot possibly put such pressure as that on. I will now ask Dr. Strahan to reply.

Dr. STRAHAN—I think we should be satisfied with the expression of opinion as regards the reception of our proposition. I do not know myself, being alone, so to speak, not having had the advice of any other assistant, whether it would be wise to conclude with any motion expressing the sympathy of the meeting with our proposal. I should like to say a word or two about what some speakers have said, especially Dr. Ireland's theory, about supply and demand, which has been spoken to by our worthy President. I think we can hardly work on that at all. I do not understand what ground we are to stand on there. If you take that principle we must apply it all round; we must apply it equally to superintendents. I do not know why one rule should apply to the young men and another to the old. Dr. Savage is perfectly correct as regards the moving population of juniors. I think it is very wise that men should have an idea of asylum work and the treatment of mental disease, which they could have by having a moving population, but I should keep the senior assistant or deputy-superintendent, or call him what you like. To have the work well done in asylums, as at present organized, you must have a man who knows more than the ordinary young man coming up from school. If things were carried out as Dr. Savage suggested—having clinical clerks and junior assistants at a reasonable salary, not intending to stay in the specialty at all, and having the cases talked out and discussed—that would give the man what we ask at once, that is a superior position to what he holds at present. If you take a man with 12 years' service—willing to take £1,000 a year as superintendent—and he makes a good superintendent the next week, he must have been a very superior assistant medical officer. Why should a man be kept at £120 or £150 a year for twelve or thirteen of the best years of his life in the hope of getting a superintendentship? If he makes a good superintendent he must have been previously a good man. You cannot apply a rule to one step in the same profession and not to another. As to supply and demand, all we can do is to make a Trades' Union of our own, but Socialism does not apply to the liberal professions unfortunately. Then as regards the cold water thrown on science, that is true; men enter the specialty with a good idea of working, but find the Committee throws cold water on them—the superintendent especially has a larger jug. Still, there is a lot of cold water going, and he gets a good deal. Under that treatment he generally cools down, and becomes a spoilt man, or if he has sufficient idea of going on with scientific work he leaves it. The present system is trying to make assistants a class of men who will simply walk round, do routine work, and nothing more. That is not for the benefit of the insane population of this country; it is not for the benefit of medical science or of ourselves as part of a profession. We are getting behind the other branches instead of keeping abreast of them, and the reason of it all is with us, this want of energy on the part of the assistants caused by the cool reception of any little work they do by superintendents, committees,

and others. I do not altogether approve of the County Councils, but I think there are men on them who would be inclined to increase the salaries of assistant medical officers in preference to giving a large increase to superintendents. I think that is one of the changes you might expect nowadays. It has not been at all strange to have superintendents jump £250, and in three years jump £250 more. That is a big jump, and I do not think County Councils will hop to that extent. I think they are more likely to give £50 to the assistant and not the £250 to the superintendent. Therefore, I should say with Dr. Tuke that County Councils will be more likely to give us the increase we require in preference to making a one-man show. I do not think it is necessary to conclude with any motion, but I thank the meeting for the satisfactory way in which they have received the paper.

The PRESIDENT—I think I can convey the thanks of this meeting to Dr. Strahan and his colleagues for the information they have given us, and I can assure him of the sympathy of every one of us. Some of us have criticized and heckled the matter, and have not perhaps looked at it quite in the way that he has; but I am sure I shall be right in saying that he has the sympathy of the Association, and that this will be shown in any movement that should be proved to be practicable. (Hear, hear.)

Paper by Dr. Baker on a “New Form of Urinal,” etc. (See Original Articles.)

The PRESIDENT said Dr. Baker had done the Association yeoman service in bringing these things forward. They might appear to be so extremely small, from their highly scientific point of view, that it was perhaps very brave for a man like Dr. Baker to bring them forward; but they were all valuable, and it was these little matters which went far more towards success in the practical conduct of an asylum than a considerable amount of pathological knowledge. A fireguard of course was necessary, and it must be provided with a lock. They were so very jealous nowadays about mechanical restraint that even the mechanical restraint of a fireguard would soon be a delicate matter. It was an ingenious idea to hide the lock. The only little doubt he would have about the matter would be the size of the key, whether it would be possible to shoot with an ordinary sized key a bolt big enough to make it impossible for a patient to detach the wire guard from the fireplace. With regard to the urinal, he must disagree on one point. If Dr. Baker could make his urinal of glass, his standing point of glass, his trough of glass, his trap of glass, and his drain of glass, then he would be safe; but as sure as ever they got a lead gutter, a lead pipe, or any part of the passage of the urine, especially if it was at all covered up from daily washing, so surely would they get a horrible smell, not within a year or two, but within four or five years. There was only one place for a urinal, and that was right outside the house. He was anxiously seeking for a urinal that should be perfect, but had never come across one yet. The paving-stones were splendid; he had a little experience of the material for wall-covering, but not for paving. The inspection plate was also good. The little rubber boots were especially so. Everyone knew what a nuisance one person could make himself in a crowded room with a grating chair; but this contrivance would render it impossible. He hoped that at each of their meetings Dr. Baker's example would be followed, and some of these little practical matters brought forward.

Dr. NEEDHAM wished to bear testimony to the value of suggestions of this kind. They were very much indebted to Dr. Baker, and any superintendent or medical officer of asylums who would bring forward details of construction conducing to the completeness and easy working of an asylum. The device for locking the fireguard was very ingenious, but it appeared to him to be unnecessary. He had not used a locked fireguard for twenty-five years, and although he no doubt had as troublesome patients as anyone else, he did not get patients burnt to death. He should never think for a moment of using one. With regard to the urinal, he agreed that lead in any form was fatal. He had lately constructed some with the floors made of specially-constructed glass-plates made

to fit corners and grooved, so that the water trickled down, and round this was a copper pipe, perforated at intervals, which discharged water down all the grooves. That was rather better than lead, which became corroded and offensive through the action of the salts of the urine. With regard to the tiles, he thought that if a broken marble flooring was required it was better to have it laid down in the solid, so as to avoid the disadvantage of having joints. Although he admired Dr. Baker's inspection plate very much, he was not at all convinced that an inspection plate was necessary or desirable. Patients had a notion that they were subjected to the kind of treatment which the Inquisition was reported to have subjected its victims to by having an eye constantly fixed upon them, which made life simply unendurable. He had heard patients strongly express the feeling that they might be under inspection at times when they were not aware of it. If it was desired to inspect a patient, the best plan was to open the door quietly, but in a fair and open manner, and not to look at them through a key-hole. With regard to the shoes for the chair, nothing could be better. In making these objections, he wished particularly to guard himself against the idea of a wish to find fault. Dr. Baker, in bringing these things forward, was particularly anxious that they should be subjected to criticism, and in doing that he wished also heartily to thank him for his kindness in bringing these subjects before them.

Dr. HACK TUKE said he was much pleased with the urinal when he saw it at the Retreat. What the President said with regard to their requiring after all a urinal out of doors was really met by a plan of this kind, because they had through ventilation. The urinal was built as a projection from the main wall, and there was a through ventilation which really prevented the possibility of any odour coming into the corridor or rooms. He was very much pleased with the whole arrangement, and also with the fireguards, if it was necessary to use them. It was still found necessary to use them at Bethlem Hospital, and this kind of fire-guard would in some ways be an improvement upon that in use. With regard to inspection plates, there was a great deal in what Dr. Needham had said. There was that kind of feeling in many patients, and this had been so strongly felt at Bethlem that the superintendents had avoided using them.

Dr. BOWERS said that everyone who was interested in getting the most perfect urinal should go to the St. Pancras Hotel, where they would see what, he thought, was very much the best urinal he had ever seen. Instead of having three sides of glass, which was certainly open to the objection of joints, it was made circular, so that there was no joint. They had been up for two or three years, and there was no sign of any smell. The floor was made of concrete, hollowed out. It was very simple, and would no doubt be very much cheaper than Dr. Baker's urinal, the price of which (£18) would be almost prohibitory.

Dr. BONVILLE FOX, while admitting that for general use in an asylum inspection plates might have a very injurious effect, thought there was one class of cases in which they were of extreme value—he referred to extremely violent maniacs, who possibly had to be kept in padded rooms. When such patients were asleep it would be very difficult to open the door without awaking them, especially as the sleep might be more or less artificial, and certainly liable to interruption. He thought that the substitution of a door, opened very quietly and carefully, could not entirely do away with the value of a slide, which could be opened absolutely imperceptibly to the patient, and yet show those who were in charge that he was in the proper state and doing the proper thing, so that one's mind could be easy about him. As doing away with the liability to rouse a patient out of sleep, the inspection plates had a real use.

Dr. BAKER said he did not mean to imply that he had inspection plates in very extensive use. He had about a dozen with 160 patients. There were certain cases where it was a manifest advantage for the night-watch to be able to look into the room without the risk of disturbing the patient. With regard to the urinal, it had been in use for seven months, and there was not as yet the

very slightest smell. He believed if the angles were properly secured by copper plates with litharge filled in, there would not be the slightest sign of any permeation of urine. With regard to the lead base, a great deal depended on the proper gradient, and he hoped that the prophecy that in a few years' time it would become offensive would be unfulfilled. The marble slabs had not been generally seen in this country. They were made in Belgium. The pavement was very durable, and was not so slippery as some other forms of tile.

Microscopical sections were exhibited by Dr. Hyslop:—A vertical section of the spinal cord and a section of the cortex cerebri.

(a) Vertical Section of Spinal Cord through Internal Radicular Fasciculus of Clarke's Column, Anterior Horn, showing

1. Neuroglia network.
2. Radicular fibres.
3. Nerve fibres.

Stained with fuchsine.

(b) Section Cortex Cerebri, Paracentral Lobule, from case of Melancholia with Visceral Hypochondriasis, following sunstroke, showing

- (a) Spider cells (uppermost layers only).
- (b) Lymph corpuscles.

Fresh section, aniline stained.

SCOTTISH MEETING.

A Quarterly Meeting of the Medico-Psychological Association was held in the Hall of the Royal College of Physicians, Edinburgh, on the 14th November. Dr. Yellowlees (President-elect) occupied the chair, the other members present being Drs. Campbell Clark, Clouston, Ireland, Carlyle Johnstone, Keay, Mackenzie, Macpherson, Mitchell, Rorie, G. M. Robertson, Batty Tuke, jun., Turnbull, Watson, and Urquhart (Secretary). Professor McIntosh and Drs. Steele and Ireland, jun., also attended the meeting. Apologies for inability to be present were received from Professor Gairdner and Dr. Howden.

The minutes of last meeting were read, approved, and signed.

The following new members were duly elected:—

William Henry Barrett, M.B., C.M., Royal Edinburgh Asylum.

Frank Ashby Elkins, M.B., C.M., Royal Edinburgh Asylum.

LANARK DISTRICT ASYLUM.

Dr. CAMPBELL CLARK showed and explained the plans of the new Lanark District Asylum. He expressed regret that the members had not more time to look into the plans, as they would thus have been better able to judge of them than from anything he could say, and also that the architect had not been able to give him any notes to submit to the meeting. He felt some difficulty in saying anything at all, for, as they would see for themselves, the plans were out of the beaten track of asylum plans as one was accustomed to see them. Of course they were accustomed to hear a deal about model plans; but if they looked for anything to correspond with the ideas of model plans he was afraid they would be disappointed. He thought the best thing he could do was to go over the general features, and allow the members to look into the details themselves. They had a plan of the frontage, of the ground floor, of the first floor, and of the second floor. They all represent the north, south, east, and west aspects respectively. The central feature of the plan was the administrative. What was usually combined in the administrative were the commissariat offices and accommodation for the staff, the Board, and medical superintendent. The quarters of the higher officers were here broken up into halves—the male official block and the female official block. The female official block would largely accommodate the female staff; and in this way would come into use very

much as a Nurses' Home. The same requirement was not found so necessary on the male side, for so many of the male staff would be married men, and he was happy to say that there were already on the property a good many houses that would be utilized for them, so that they would be enabled to use the male official block for public offices and quarters for the medical officers, and, perhaps, also for the steward, clerk, or some others. In the centre was the dining-hall looking to the south. This was intended to accommodate about 500 patients, but all the patients who were able to dine at table would not be accommodated there, for a certain provision was made in the two hospitals—male and female. In the dining-hall they had in addition practically two smaller dining-halls at the sides for the attendants. As a rule, in any plan he had seen lately, the attendants were provided with accommodation away from the dining-hall and adjoining the kitchen. He did not know whether the members would consider that—as in this case—it was a better plan to have them nearer the patients. Going further back they came to the kitchen, which was flanked on both sides by ample scullery and pantry accommodation.

Dr. CLOUSTON asked whether Dr. Clark would like to be interrupted with questions, or would he prefer that these be reserved until the end?

Dr. CLARK—I would very much prefer to be interrupted, for then you would get what information you want. I have prepared no systematic description, and, therefore, it will not disturb me at all to be interrupted.

Dr. CLOUSTON—Then may I ask if these two attendants' dining-halls are screened from the main dining-hall, or do they form part of the same room?

Dr. CLARK—The architect has not said anything on the subject yet, but my idea is that there should be a screen to a certain height, and that the attendants can, if necessary, hear what is going on and turn into the hall at once.

Dr. CLOUSTON—Are the attendants supposed to be dining at the same time?

Dr. CLARK—No; but after they have served the patients. I do not know what resolution may be arrived at, but if they do as they are doing at Bothwell they will dine after they have served the patients. The service room is at the kitchen itself, forming a part of the kitchen, and intercepting the main corridor, the male and female sides ending here. This large space will constitute ample room. The scullery accommodation is very ample, and I think that is a most important thing. I think there is a very general defect in very many asylums, although I believe there are some excellent exceptions. In some you will find that all the dirty dishes, knives and forks that have been used in the dining-hall have to be carried through the kitchen before they get to the scullery, and, therefore, you find the kitchen accommodation utterly inadequate for the traffic and the scullery very much out of the way, but here you obtain considerable and immediate accommodation for clearing away dirty dishes and a long range of hot-plate service. There is also a room for the kitchen patients to take their food in. As a rule, they take food in a very haphazard way, and I do not think their meals are very nicely served, or that they acquire very nice habits. The store, I think you will admit, is pretty ample, and instead of having it very much broken up, as in some places, it is here centralized. You have soft goods, *i.e.*, groceries and provisions, inside the general store, with a dwarf partition and glazed screen to prevent the dust getting into the other parts of the store where the dry goods are. The store communicates at each end for supplying the female attendants (at the west) and the males (at the east), and it communicates directly into the cook's store, and, lastly, into the kitchen for the supply of bread. Of course these details will be, more or less, unintelligible to you, for the plan is on a small scale, and you could not follow it at your distance unless it were on a larger scale. One arrangement that will be useful is that the Caledonian Railway from Edinburgh to Glasgow is to be connected directly at Hartwood with the asylum by means of a special line of railway. In that way coals will be carried direct to the coal store, and waggons will be shunted alongside a platform in front of the general store. The work-

shops are grouped together, but I do not know that I can say anything about them at present, except that the accommodation is very ample. In fact, that seems to be a principle pervading the whole plan, viz., that the allowance is, perhaps, on the side of extravagance, but certainly not on the side of meanness. The mortuary comprises service-room, mortuary, and post-mortem room, and there is a fire engine station which can be got at from the male and female side. The boiler-house is very large, and communicates direct with the laundry. I may mention that I understand the Chairman (Dr. Yellowlees) is, as regards the electric light, ahead of us. They have decided to have the electric light at Gartnavel, and will probably be before us. The intention of the Board is to have the electric light all through the asylum; we are to have no gas at all.

The CHAIRMAN—How do you propose to provide light if the electric light fail?

Dr. CLARK—Well, our architect does not seem to take into consideration that the electric light can possibly fail. Fortunately he is a man who has great experience of electric lighting. He has it in his own house, and has introduced it into many others, and has no question of failure at all. If it does fail I suppose we can but fall back on candles or paraffin lamps.

The CHAIRMAN—You will make the engine which is available for laundry purposes serve for the electric light as well?

Dr. CLARK—Yes; if you have time to look into the laundry, I think you will find the arrangement very complete. There are separate receiving rooms for the males and females. That will save a deal of trouble in receiving on different days. There is a large washing-house, with tubs along the one side for males and along the other side for females, and boilers in the centre in the same way. Then there is a set of tubs in the centre for officials—male and female. The foul washing-house is quite distinct from the laundry; you have to go outside the laundry to get into it. There are a number of other questions, I must say, that have not yet been matured, and I do not feel competent to speak about them at present. We have a number of things to go into that we have not made up our minds about. I cannot say for certain what amount of machinery we will have in the laundry. If we pass along, leaving the official block and coming along the female side, we reach a group of buildings which are entirely by themselves—the acute senile and infirm part of the asylum and the hospital proper. We have the same arrangement on the male side. I should like to hear what Dr. Clouston would have to say as to these, for he is better qualified than I am to speak about them, and a number of the ideas appear to have been got from the working of the Morningside Asylum. I think it has some advantages for the purely infirm and senile in that we are able to separate our infirm and frail patients from the hospital and still place them so conveniently that if they have at any time to take to bed they have simply to pass through a door. The infirm patients have their own little dining-hall very convenient to the kitchen. I think it is undesirable that they should go into the common dining-hall; they may be knocked about and injured, and they are frail and not fit for much travel. A main consideration was to bring their dining-room as near as possible to the general kitchen. It seemed unnecessary to have a kitchen that would cook for all in the hospital, whether they were in bed or out of bed, and in this case it is only necessary to cook for those who are in bed or getting extras. The regular dinners will be cooked in the main kitchen.

The CHAIRMAN—Do you intend a man and his wife to take charge, and the woman to do the cooking in these separated wards?

Dr. CLARK—That is not decided. It is a costly business if you are to have three cooks. In this case all the cooking will be done in the kitchen except extras. There will be only custards, beef tea, and little things like that, and I do not think it should be necessary to have a woman purely for that purpose.

Dr. CLOUSTON—Am I right in understanding from your description that you

have the hospital practically divided into two sections—one for the frail that are incurable, like old bed-ridden women, and the other for the frail that are curable and may be very acute?

Dr. CLARK—No; I think you have misunderstood me. I may explain it in this way. Take our own asylum at Kirklands. We have twenty in a sick ward. Of that number fifteen will be out of bed and trotting about, more or less. It is scarcely fair to call them hospital patients. But I think it is fair that when they are only passing perhaps a day or two in bed once a month or so they should pass through the door and take their diet in the hall; but patients like that are better not to go through to the general dining-hall and travel about with the other patients.

Dr. CLOUSTON—My definition of an asylum infirm patient is one that needs extra nursing from any cause, bodily or mental.

Dr. CLARK—But there is nothing to prevent them taking their diets. There are patients in the hospital that cannot take any portion of the general diet, and you may have to make a special diet for them in the hospital kitchen.

Dr. CLARK, in answer to further questions, said the accommodation for the senile and that for the infirm were not separate; they really worked into each other. Some might be in the hospital one day, and another day in the day-room. One woman or man would be in charge of the whole sixty beds. All these were grouped together, and were totally different from the chronic ward, which was behind. The same man or woman would not be in charge of the acute patients, where the bodily state was strong and vigorous. The question came to be, whether there should not be a day nurse for the males. That was one of the questions he was not clear about. The hospital for the really sick was one story; and the rest of the building, *i.e.*, for those going about all day, was two stories. It was the Morningside idea, worked out, perhaps, in a different way. The retreating wing at the extremity of the main hospital was the infectious hospital. If the place became crowded, that might be used for ordinary accommodation. He did not think it was objectionable to keep the two linked, even in case of small-pox—on which there had been so much discussion. That building rather obstructed the light of the acute ward behind it; and the idea had been to get it further along, but unfortunately the ground would not admit of that. The question how the drains should run from the infectious hospital had not yet been considered, and he would be glad to hear the ideas of the members regarding that.

Professor McINTOSH—Those drains should not run into the others. What is the nature of the soil?

Dr. CLARK said it was a pretty open soil; there was no gravel or sand, and very little clay. He could not say whether there was any alluvial deposit. The railway is almost finished.

The CHAIRMAN—Have you got any of the old-fashioned things called airing-courts?

Dr. CLARK—No.

The CHAIRMAN—I am old-fashioned enough to dare to put the question.

Dr. CLARK pointed to a space which, he said, he had thought would commend itself to the Chairman as a good airing-court.

The CHAIRMAN—It is a very bad one.

Dr. CLARK pointed out the places in which the patients would have exercise; and then, reverting to the question of the isolation of the infectious diseases hospital, remarked that a great deal had been said of late about the infectiousness of small-pox, but that it was still an open question whether small-pox could just drop from one house down into another.

Dr. URQUHART—We have had experience of that in Perth lately, so much so that the authorities, after full consideration, built a separate small-pox hospital, because they found that the small-pox spread from the old infirmary, surrounded, as it is, by buildings. That was conformable to recent investigations. The

small-pox germ is carried in the air further than that of scarlatina. I think that in this respect small-pox is an exceptional disease.

Dr. CLARK—I do not think that has been confirmed by authorities, though. It was generally supposed that the Perth authorities were unnecessarily alarmed on the subject. It is still an open question.

Dr. URQUHART—That was their experience—the small-pox spreading to the neighbouring street.

The CHAIRMAN, referring to the plans, pointed out that the main building had an exposure directly south, and that the side blocks had an east and west exposure, although Shotts was supposed to be the coldest parish in the whole of Lanarkshire.

Dr. CLARK—That is a question that was raised, and we had a good deal of discussion about it; but there are so many things to get in building an asylum that sometimes we have to compromise. One gentleman said that Shotts had nine months of winter and three of autumn. In that case I don't know, therefore, that a southern exposure will be material, for there will be as little sun at the one time as at the other. Exposure to the south is theoretically the right thing, but in practice it does not always work, and you can't have all the exposures to the south.

Dr. CLOUSTON—I must say I would be inclined to suggest as a practical matter that these two rooms for infectious diseases should not yet be contracted for—that you should begin without them. Science is altering our ideas on the question of infection very much.

The CHAIRMAN—To which I would add the suggestion that the acute and chronic blocks should be placed further out, and more to the south than they are at present.

Dr. URQUHART—I have been visiting a great many asylums lately, and have been very much struck with the plan of the Cane Hill Asylum, in Surrey. I think that is the finest of the large asylums, so far as I have seen. There the connecting corridors, instead of being straight and V shaped, as in Dr. Clark's plan, are semi-circular, with radiating wards, so arranged that by placing high and low wards alternately, each gets a fair share of sunshine.

Dr. CLARK—That is a question that was thoroughly considered, and the architect had that specially before him, and, with the Commissioners, tried to shift all these blocks so as to bring them all to the south. It looked very simple at one time, and they spent a long time in trying to bring them to that, but they had to give it up. I made a calculation that all the patients spend three hours a day in the dining-hall, which is to the south; and that is during sunshine. I do not think the plan does the architect justice, for you have no perspective at all. I should think the ventilation will be very free. Of course we have to take into consideration the fact that the site is very high. I do not think there is any fear of ventilation. I am only afraid there will be too much of it. The site is 650 feet above the level of the sea. It is cold, and exposed especially to the south-west, and we will have to plant a good deal around and to the south-west. I thought when Dr. Urquhart wrote to me that I was coming too soon, for I am not able to answer all questions. Our ideas as to working details are only coming as we see the buildings grow.

The CHAIRMAN—I am sure we are very much obliged to you, certainly for allowing us to see the plans and ask questions. I think that really is the value of bringing forward a plan, and that you have done us a greater kindness than if you had brought us a formal paper.

Dr. URQUHART read a paper on a "Case of Cerebral Tumour," with remarks by Dr. Byrom Bramwell.

The leading features of the case were that the patient was admitted with a history of hypochondria, complaining of occipital headache, exaggerated sensibility to sounds, sleeplessness, and mental dulness. These symptoms did not appear to be constant. He could blow the organ while declaring that even

musical noises were torturing to him, and he was observed to have a fair amount of sleep. About two years after the first onset of his malady he was observed to present paralytic symptoms, loss of control over the sphincters, difficulty of articulation, shuffling gait; the headache then became frontal, and gradually all his movements were executed in a fumbling manner. Three months after these symptoms were first noted he was seized with an epileptiform convulsion, in which the convulsions were almost entirely limited to the left arm, slight twitching of the face, the right angle of the mouth drawn outwards, and a tremulous movement of the left leg. This was followed by impairment of power and sensibility of the left side, and a hilarious mental state. The left leg became stiffened in extension with constant slight tremors of the calf; power of voluntary motion of the limbs of the left side was lost; the optic discs were found to be swollen. A second fit followed in about two months. In it the convulsions affected the right arm and leg, and the right side of the face. The head was rotated to the right, and the eyeballs similarly directed. The left side was not affected. Order of implication, eyes, head, face, arm, and leg. One attack followed another very rapidly till a *status epilepticus* became established. Breathing was more and more embarrassed, and the patient died in a few hours. At the autopsy the dura mater was found adherent to the vertex; the veins on the surface of the brain very much congested, especially about the right fissure of Rolando, and bulging was observed in the right motor area. The part so affected embraced the lower parts of the ascending frontal and parietal convolutions, and the middle and inferior frontal convolutions. On section a cyst, nearly the size of a pigeon's egg, was found in this position. It was filled with dark-coloured, clotted blood and pink gelatinous matter. In the upper part it approached very near the surface; in the lower part it was about a quarter of an inch from the surface of the brain. Dr. Byrom Bramwell kindly examined the tumour, and submitted the following remarks:—"I find a large extravasation of blood in the anterior and inferior part of the right hemisphere. The remaining portions of the brain appear to be perfectly normal. The walls of the blood cyst seem to be composed of gliomatous tissue. The tumour itself is a glioma or a glio-sarcoma. There are numerous punctiform hæmorrhages around the blood vessels in the brain tissue adjacent to the lesion (*i.e.*, in portions of the brain which, to the naked eye, appear to be perfectly normal). The walls of the cyst are composed of gliomatous tissue. The tumour itself is chiefly composed of round transparent cells, mostly containing one nucleus. These cells are for the most part about twice the size of white corpuscles. Around some of the blood vessels in the brain adjacent to the tumour there was well-marked softening, with evidence of inflammatory changes. Large bodies, like epithelial cells, were seen in the nerve-tissue on the sides of the softened cavity. Some of the sections show a colloid-looking material, evidently derived from the extravasated blood. No doubt these bodies which at first resembled epithelial cells are merely aggregations of this colloid material, and not cells of a new growth."

Dr. IRELAND—During the reading of Dr. Urquhart's paper I followed the symptoms detailed, in the hope of diagnosing the site of the tumour, but I confess that I have failed to do so. The earlier symptoms—difficulty of articulation, dulness of hearing, diminution of sensibility, and increased flow of urine—seem to indicate a tumour near the posterior portion of the pons. I do not know whether facial paralysis was mentioned. I do not even yet know precisely where the tumour was situated. Dr. Bramwell puts it in the anterior and under part of the right hemisphere. It is difficult to connect the mental symptoms with this tumour. No doubt the parts round the frontal were in a state of irritation, owing to this growth. I should say it was a tumour of slow growth, commencing below and working its way upwards, and causing convulsions, and carrying off the patient by the constant irritation it caused in the motor area of the right side of the brain.

Dr. CLOUSTON—It is very common for the mental symptoms to precede the

motor symptoms in gross diseases of the brain in cases of tumour, and of syphilitic disease of the brain, and of atrophies and destructions from impaired blood supply. I have a young man now in whom the mental symptoms began by moral perversity. Afterwards they became delusional, and then the motor symptoms and convulsions, with partial paralysis of one side, appeared. I can recall many cases of senile patients too in whom the mental symptoms preceded paralysis. It seems to me that in such cases we have to go back to the question of mental heredity. I think in cases where we have mental symptoms preceding motor symptoms from gross disease, it means that the mental tissue of the brain was predisposed towards disease, and took exceedingly little irritation to set up that disease. In most of the cases, where an ordinary attack of mania follows a shock like a railway injury, or a fall, when you come to inquire into their heredity you will find a neurotic or mental taint. The gross disease in such cases acts in the same way exactly as in ordinary hereditary cases. A woman predisposed to insanity loses one of her children and becomes insane, the emotional cause here acting just as a fall, or the commencing trophic changes round an incipient brain tumour. Hæmorrhages often occur in a multiple and capillary form, beyond the range of the actual tumour, probably caused by vascular spasm, followed by paralytic dilatation and blood stasis, this resulting from irritation; just in the same way we can imagine mental symptoms to occur from vascular and neurine irritation spreading outwards round the area of the tumour in the ordinary lines of function.

Dr. MACPHERSON—I should like to make a few remarks, having seen a case, somewhat like this reported by Dr. Urquhart, which I published in the "Edinburgh Medical Journal" two or three years ago. It was a case of tumour in the right frontal lobe, pressing on the orbital convolutions, and, as in Dr. Clouston's case, the symptoms began with moral perversion and drunkenness, and gradually ended in dementia, with motor convulsions. In connection with the remark which Dr. Clouston has just made, it is interesting to note that tumours in the frontal lobes very often do produce motor convulsions, though quite apart from any direct pressure on the motor areas of the brain, and, in accordance with Dr. Hughlings Jackson's theory, I think it may safely be conjectured that these motor symptoms are produced on account of the motor and sensory functions being re-represented in the frontal lobes, and that the frontal lobes thus exercise a controlling influence over the motor and sensory areas of the cortex.

Dr. G. M. ROBERTSON—Dr. Ireland has started the question of the localization of the tumour during the life of the patient. He has mentioned phenomena such as the disturbance of smell, which accompanied the other symptoms during life, and which were not afterwards fully explained. In most cases of gross brain disease, there are these functional disturbances, which have really no organic connection with the disease, otherwise there is in this case a regular sequence of symptoms which might perhaps have led one to diagnose the seat of the lesion. The first symptoms one observed were the mental symptoms, and Dr. Clouston has put forward a theory to account for this. At the same time, when the mental symptoms occur so prominently one suspects a lesion in the intellectual, and not in the motor or sensory areas of the brain, and the frontal lobes one would suspect most. The next symptom that occurred was that of pain, and it is curious that the pain was first complained of over the occipital lobes, the opposite side of the brain from the seat of the lesion. An observation of a similar kind has been recorded by Dr. Ferrier, I believe, in which he points out that pain may assume the position of *contre coup*. Operation for tumour on the strength of the position of the pain alone is a very risky proceeding, and one may operate on the vertex and find the tumour at the base. The pain complained of was not a serious or prominent symptom, and it pointed to the fact that probably the lesion was not connected with the membranes. The internal parts of the brain are not sensitive; one can work with the finger in the white

and grey matter without producing pain at all, but the membranes are supplied by the fifth and other nerves, and are very sensitive, and section of the membranes causes great pain. If a lesion occurs in the membranes it causes irritation, and a main symptom of the case is pain, and often vomiting. As pain was not an important symptom, we conclude that the lesion was not on the surface of the brain. Another reason for believing this was the late occurrence of the convulsions, for had the lesion been in the grey matter or membranes near a motor area, convulsions would have occurred early, and been a prominent symptom. On the other hand, a lesion of the white matter, especially if it be of slow growth, tends to produce not convulsions, but rather paralysis, by interruption of the motor tract. To have convulsions one must have irritation of the grey matter, which does not occur in slow growing lesions of the white matter. The first convulsions that the patient had pointed conclusively to a lesion of the right side, and the anterior part of the brain. The facial and the arm muscles were those mainly convulsed, pointing to a lesion under the middle of the ascending frontal; at the same time the leg was slightly convulsed, and there was marked unconsciousness, and this also points to a lesion tending to be more anterior than posterior to the fissure of Rolando. In a Jacksonian fit such as this was, unconsciousness does not necessarily result, and when we have unconsciousness so marked in a fit that was not severe enough to convulse strongly the leg of the same side, one suspects strongly that the lesion itself is in, or very close to, an intellectual area, such as the frontal. The second convulsion was on the other side of the body mainly, and would have upset one's ideas as to the localization of this tumour. The explanation of this is not quite clear. It probably was that the lesion had extended and had interrupted many of the motor fibres coming from the grey matter, so that the discharge from the grey matter would not come in full volume. At the same time the commissural fibres going to the other half of the brain must have been intact, and the motor discharge must have mainly gone in that direction. The full significance of these commissural fibres in convulsions is not thoroughly understood. Convulsions are known to be transferred from one side to the other, and Dr. Buzzard, by painting blistering fluid on a limb in which an epileptic aura was experienced, has transferred it to the other side. The case has been a very interesting and important one, and the above is my explanation of the symptoms, so far as I understand them.

Dr. URQUHART—The case now reported was most obscure in its inception, and it was only after the fit on the 27th December—a little more than a year after admission—that the first absolute symptom of gross brain disease occurred. The order of implication was from the face downwards by the arm and leg. In the last fit it would be noted that the right side was convulsed, while the left was affected by clonic spasm. It may be conjectured that there would have been a general epileptiform seizure had it not been for the persistent spasm of the left side, which had lasted since the first fit. The tumour, no doubt, had grown from within outwards, so that the convulsions observed to be affected were implicated in a secondary manner. Dr. Clouston's observation regarding the precedence of the mental over the motor functions in such cases is borne out by the history of that now reported. There was no doubt as to the presence of a neurotic inheritance. Arrangements were being made with Dr. MacEwan to see the case with a view to operation, but the fatal event supervened before these were completed.

Dr. MACKENZIE then read a part of a paper on "Sulphonal and Caffeine." It dealt with his observations on the action of sulphonal as used in the Northumberland County Asylum.

Dr. G. M. ROBERTSON—We have treated many patients at Morningside Asylum with sulphonal, and many of our observations have corresponded exactly with those of Dr. Mackenzie. The dose we give is about 30 grains morning and evening, and one of the marked symptoms is this appearance of

drunkenness, the inco-ordination and placidity of the voluntary muscles. Some patients seem utterly collapsed, but really are not so collapsed as they look, for their pulse is pretty fair, and they all get over it. We have had one or two good results. A woman, who for five months suffered from acute mania, after twelve doses of 30 grains each, quieted down, and became quite reasonable. At the same time her bodily weight increased 17 lbs. in six weeks, and she has since been discharged recovered. In another case of chronic mania there has been an interval of quietness over thirty days, such as never occurred before in the history of the patient. In ordinary sleeplessness it has done very well. It acts very slowly; we usually give it four hours before its action is desired. The action lasts a long time, and the patient looks exhausted next day. There has been more vomiting in our cases than Dr. Mackenzie reports. The sleep produced is a very natural one. It seems to produce a state of the brain such as natural sleep does. A paleness of face is seen in the patients. It may act in this way—relieving the excitement of mania by relieving the congestion of the brain. It is best administered powdered up and in mucilage, but it is taken very easily in soup or milk. It has a slightly bitter taste.

Dr. WATSON—I think sulphonal is one of the very best hypnotics we have, and I have used it largely, not only in the asylum, but in the parochial hospital, with which I am connected. In addition to its hypnotic action, it seems in cases of chronic arthritis and other painful affections to have an undoubted analgesic action. Dr. Leech, in his paper in the "British Medical Journal," denies this, and attributes the relief of pain to sleep coming on; but I am not at all satisfied that he is correct in this view. I have not had the experience of pushing the drug as Dr. Mackenzie has done, rarely giving more than 30 or 40 grains once a day, and although the effects continue sometimes during the whole of the following day—the patient waking up, taking food and falling asleep again—the symptoms detailed by him and others as following more frequently administered doses were not observed. Neither have I observed either vomiting or purging to follow its use. If a patient is suspicious, perhaps the best way to give sulphonal is to mix it with porridge and sweet milk (if it is his usual supper), which very effectually conceals the slightly bitter taste.

Dr. URQUHART—We all owe our thanks to Dr. Mackenzie for his valuable paper. I have lately had the pleasure of personally observing his valuable experimental researches in the use of sulphonal. In my own practice I have often been disappointed with ineffectual results; but, now that we are made aware of the limits of safety up to which this drug can be pushed; and at which the greatest benefit is to be expected, we shall continue to employ sulphonal with greater confidence and hopefulness than hitherto.

The CHAIRMAN—I heartily agree with all that has been said in regard to the paper. I think this kind of work is of extreme value, for it settles the question with reference to this particular drug. In this exhaustive and bold series of experiments, what has struck me most is the extent to which it was pushed. I have never ventured to give sulphonal in such doses as Dr. Mackenzie uses. I should like to know if he has never seen from these extreme doses any alarming or perilous results?

Dr. MACKENZIE replied that he had seen prostration, in which the heart did not seem to share.

The CHAIRMAN—Is it a common feature that the ground seems to rise? One man, who always seemed dazed after sulphonal, complained lately that the ground had risen, and had gone into waves; "as in a ground swell" was his expression.

Dr. MACKENZIE—It is frequently expressed as sea-sickness.

The CHAIRMAN—That is perhaps a different way of expressing the same thing.

Dr. CLARK—What I want to say is what I believe a good many would like to say also: the great difficulty they feel with regard to all these remedies that

are introduced. They cannot be said to be a panacea for all forms of mental disease; and the difficulty is to know in what particular case you are to give a specific remedy, for the question is whether you are producing certain results or whether they are coming about in a natural way. To give an illustration, I had two cases of general paralysis—one a female and the other a male. I called in a surgeon to see the male, who had been in a state of acute excitement night and day for six months, and in hitting his elbow against the side of his room had possibly chipped off a bit of the bone. The surgeon soon had to deal with extensive cellulitis, and had to make deep incisions about three inches long in the upper and lower arm. In order to get surgical rest he tried him with sulphonal. He got about 30 grains, and slept. The surgeon thought that was the effect of the sulphonal. I said I was not sure, but that it was the effect of the depletion. However, we tried it on the female, with the result that double and triple doses had no effect whatever. These are cases that show we are rather uncertain as to what we should do with hypnotics. My experience is that general paralytics are most unsatisfactory patients to treat with hypnotics of any kind whatever. I am sure we value highly the most excellent paper read to us by Dr. Mackenzie. I feel that he is working up the subject in a scientific and precise manner, and that is the only right way of taking up such questions at all. Only I fear he was rather hurried, and possibly we have not so exhaustive an account of the results as we would like. The paper is one which we will enjoy much more to read than when read to us; and I think we are much indebted to him.

The CHAIRMAN—Has Dr. Mackenzie anything to say about the differentiation of cases, and as to whether general paralytic cases are amenable to sulphonal?

Dr. MACKENZIE—I have tried it on a series of cases, almost representative of the different forms of insanity—puerperal mania, melancholia of the different varieties, chronic mania, acute mania in males and females, and acute mania in old men and melancholia in young people; and I cannot say that I have found it fail in any case. If it had at any time failed I simply doubled and repeated the dose, a treatment by which they were invariably overtaken.

The CHAIRMAN—What about the excitement associated with palpable organic change?

Dr. MACKENZIE—I think all muscular excitement is allayed by it. As its action progresses they have no desire to speak; destructiveness ceases, because they cannot destroy. They have nothing to say; their great desire under sulphonal is to sleep—there is intense mental and muscular drowsiness.

The CHAIRMAN—You have not been contrasting or comparing it with other hypnotics?

Dr. MACKENZIE—Yes; I have contrasted it with paraldehyde, and several cases will show that where paraldehyde in my experience failed, sulphonal was attended with great success. I have seen several cases put under its influence of, *e.g.*, excited melancholia, chronic mania, and other varieties of the muscular or objective insanities, while hyosein and chloral would produce a form of toxic sleep from which they did not always emerge improved, but frequently with signs of the severity of these drugs on the circulation. In sulphonal the heart's action was always good. I never saw a symptom of failure. It might take about a week to completely saturate them with the drug, then it was discontinued, and it took less than another to enable them to leave their beds—a change for which many of them were indebted to sulphonal.

Dr. WATSON—Have you used sulphonal in dementia, and with what results?

Dr. MACKENZIE—Yes. It allays the noise, excitement, and destructiveness. But I did not see it attended with very much mental improvement in the case of demented of long standing after they had recovered from the effects of the drug. Of course there are cases where we seldom look for mental recovery.

Dr. ROBERTSON—What is your biggest dose?

Dr. MACKENZIE—180 grains in twelve hours.

The CHAIRMAN—The gratifying thing about sulphonal is this—that while it quells excitement as efficaciously as hyoscyamine, the man when he awakes is much better. Hyoscyamine does no permanent good; that is the experience of most people; but it is said that after sulphonal the patient emerges another man altogether. That is a great matter. But 180 grains in twelve hours is something solemnizing; it is something very much further than any of us in the North have dared to do so far as I know.

It was resolved to hold a joint meeting with the English members at Manchester in March, instead of the usual spring quarterly meeting in Glasgow.

THE NEXT QUARTERLY MEETING.

This will be held in Manchester, in March, 1890. The Honorary Secretary, Dr. Fletcher Beach, Darenth, Kent, will send out a notice to every member, with full particulars as to time and place.

CONGRÈS DE PSYCHOLOGIE PHYSIOLOGIQUE.

During this last Exhibition year, with its more than forty Congresses, Paris has played her part admirably—a most courteous and attractive hostess, with the rare gift of putting her guests completely at their ease, and of affording them every opportunity of getting to know her and each other. In almost every branch of knowledge there was a Congress, and it is not surprising, therefore, that on one subject in which the French are deeply interested, “*La Psychologie Physiologique*”—or, as the English not inaccurately translate it, *Experimental Psychology*—there was a Congress which lasted five days, and was successful beyond the hopes of those who planned it. Some eight years ago such a project was talked of, but no attempt was made to carry it out, as it was feared it was not likely to excite a wide enough interest to secure success, and that it might launch its projectors on too wide a sea with too many sunken rocks. But the last eight years have made a very great difference in the spread of interest and knowledge in this subject throughout Europe. The Chair of *Psychologie Physiologique*, which M. Ribot so well fills, has been created; the *Société de Psychologie Physiologique*, under the Presidency of M. Charcot, with MM. Paul Janet and Ribot for Vice-Presidents, and M. Ch. Richet for General Secretary, was founded in 1885, and has included many well-known men in science and literature—M. Helmholtz, M. Taine, M. Sully Prudhomme, M. Wundt, M. Donders, and from England Mr. Galton, Professor Bain, Dr. Bastian, Dr. Broadbent, Dr. Hack Tuke, Dr. Ferrier, Mr. Sully, Mr. G. J. Romanes, and others. Its Bulletins, though not widely noticed in England, have contained many valuable contributions from first-rate observers to the very difficult subjects of experimental psychology. In England in 1882 the Society for Psychical Research was founded, under the Presidency of Mr. Henry Sidgwick, Professor of Moral Philosophy at the University of Cambridge, with Professor J. C. Adams, Lord Rayleigh, Professor Oliver Lodge, Professor Alex. Macalister, Professor J. J. Thomson, Professor Barrett, and Dr. Lockhart Robertson now on its Council, and which has not been by any means inactive, and similar societies have since risen up at Berlin, Munich, Moscow, Boston, U.S.A., and elsewhere with the same objects, showing a rapid growth of interest in these subjects of *Experimental Psychology*.

An attempt at an International Congress on these matters was boldly resolved upon at Paris in the spring of last year with M. Charcot as President, and M.

Ch. Richet as General Secretary. The invitations for the Congress were widely circulated, and about 200 answers were received from persons anxious to attend. It was a very busy summer season, for there were other Congresses, and many things to be attended to at the same time (August 6-10), but about 150 of those who had entered their names and paid their small fees were in attendance when the opening day came.

It was a truly International Congress. Its members came from many countries, among them from Germany, Russia (including Finland and Poland), Austria, Belgium, England, Italy, Switzerland, Roumania, Holland, Sweden, Chili, Mexico, and Brazil, and many well-known men were present, including Ballet (Paris), Benedikt (Vienna), Bernheim (Nancy), Binet (Paris), Bourru (Rochefort), Carus, Danilewsky (Kharkoff), Déjerine (Paris), Delboeuf (Liège), Drill (Moscow), Espinas (Bordeaux), Ferrari (Paris), Fontan (Toulon), Forel (Zürich), Galton (London), Gley (Paris), Grote (Moscow), W. James (Cambridge, U.S.), Pierre Janet (Havre), Jules Janet (Paris), Lapontine (Moscow), Liégeois (Nancy), Lombroso (Turin), Münsterberg (Freiburg), Nieglich (Helsingfors), von Schrenck-Notzing (Munich), Séglas (Paris), H. Sidgwick (Cambridge), Sperling (Berlin), and Tokarsky (Moscow).

M. Charcot was unfortunately not able to be present at the Congress, and at the first meeting on August 6th M. RIBOT, as Vice-President, took the chair, and delivered a short address of welcome to the strangers, and explanation of the hopes and objects of the Congress. It was, he said, at least a novelty. There had never been one like it before. This was an age of Congresses in almost every subject—of chemists, physicists, biologists, and many others, but not once had they had such a meeting of Experimental Psychologists. It was hardly necessary to repeat to such an audience what was so generally recognized now, that the natural task for psychologists was constant and accurate observation of what they saw around them, and experiment under very rigorous conditions. It was this method of objective experiment which was the most essential basis of their Congress, a method which gave them a hitherto unparalleled opportunity of exact observation in their sensations—sight, hearing, and many other things hitherto too vague, the association of ideas, the control of movements, and that group of studies which before all others had raised in later years the keenest interest among psychologists, viz., the phenomena and results of Hypnotism. What most deserved consideration in that department he should leave it to their Secretary General, M. Ch. Richet, to lay before them.

M. CH. RICHEL then rose to explain what was the plan that the Committee for the organization of the Congress had adopted. They had thought it would lead to the best furthering of knowledge, and the greatest social convenience of all assembled, that some subjects should be selected from the vast mass that fell under the head of Experimental Psychology, and that in each of these selected subjects some clearly-worded hypothesis or statement should be laid before them for discussion, and, if possible, for an opinion. With the help of MM. Gley, Marillier, Magnan, Ochorowicz, and P. Brissaud, he had drawn up a short *resumé* on nine points originally, but, as he saw that with such a large gathering that would be too much, he would reduce them to four, viz.:—(1) Muscular Sense; (2) the Statistical Study of Hallucinations; (3) some results of Heredity; and (4) Hypnotism—the causes of mistake in observation of its phenomena; the sensibility to its induction; the distinction between normal and hypnotic sleep; automatic writing; disturbance of unconscious movements; the alterations of personality; the phenomena of transference and the action of magnets; and finally, the best terminology of Hypnotism and the accurate definition of the words used. In the statistical study of hallucinations they would all feel the loss of Mr. Gurney, who had started the inquiry five years ago in England. It was a subject that needed united effort from many observers. So also was Heredity. It was a subject on which Mr. Galton would be thankful for an army of observers. As to Hypnotism, he was glad to

be able to say that their Congress had brought together representatives of every school, and so in itself represented no school, for it represented all.

For the convenience of business the members of the Congress were asked to put down their names for service on one or more of the four Committees on Hypnotism, Heredity, Hallucinations, and Muscular Sense. The Committees met at nine a.m. for three hours, and a general meeting was held at two p.m. for three hours to consider and discuss the reports of the Committees. As the Committees on the three last-named subjects only sat for one or two days each, it was found quite possible and convenient for their members to attend the Committee on Hypnotism also, and both this and the general afternoon meetings were very fully attended.

The Committee on Muscular Sense met under the presidency of Professor W. JAMES, of Harvard University, and discussed a short statement that had been drawn up by M. Gley. They agreed that the so-called Muscular Sense could be reduced to a group of centripetal sensations, but were not completely of one mind as to the limits of the accompanying intellectual phenomena.

In the Committee on Heredity, Mr. FRANCIS GALTON took the chair, and proposed the wide distribution of a paper of questions which he had himself very carefully drawn up on the influence of maternal impressions on birth-marks, the inheritance of habits acquired by the parents, and certain points of retrogression and variations, and this, after some discussion, was adopted as a practicable way of collecting information.

M. GRUBER afterwards, in describing some very remarkable associations or particular colours with particular sounds (*l'audition colorée*) obtained the assent of the Congress to the circulation of a similar question paper.

The Committee on Hallucinations, with Mr. F. W. H. MYERS as Chairman, discussed an analogous "census paper" which had been circulated lately in England by Professor Sidgwick, and in France by M. Marillier, the French Secretary of the Society of Psychical Research. It contained only a single question, viz.: "Have you ever, when believing yourself to be completely awake, had a vivid impression of seeing or being touched by a living being or inanimate object, or of hearing a voice, which impression, so far as you could discover, was not due to any external physical cause?" It was to be laid before as large numbers as possible of all classes and countries, and to be answered only by "Yes" or "No," and a signature of name and residence. It was not proposed to publish the names without special permission. Of those persons who might answer "Yes," a few other questions in a second paper were to be asked. It was intended to exclude insanity and delirium. The object of the inquiry was, in the first place, to ascertain approximately the proportion of persons who have had such experiences, and, in the second place, to obtain details as to the experiences with a view to examining their cause and meaning. For the first object, it was important that the question should be very widely asked, and of all sorts of people, not only of those who are thought likely to have had such an experience, or of those who are thought likely not to have had it. The answer "Yes," and the answer "No," were equally important. Up to August, 1889, 2,038 answers had been obtained in England, of which about 12 per cent. were "Yes;" in France, out of 345, about 20 per cent. had been "Yes."

M. PIERRE JANET wished to extend the circulation of the paper to the morbid and insane, and to restrict the collection of the statistics to medical men and psychologists.

Professor W. JAMES preferred the original plan, as making the collection of facts from a very large body of healthy persons, perhaps 40,000 or 50,000, possible; and after a little discussion the Committee agreed to invite the sanction of the Congress for the original question paper, with a few verbal modifications, and with the possible addition of some more specialized information in some morbid cases.

M. MARILLIER presented this report to the General Congress, and after some explanation it was unanimously agreed to continue the inquiry into the statistics of hallucination as they had been begun, and as the Committee had recommended.

The Committee of Organization subsequently selected Prof. Grote, of Moscow, M. Marillier, von Schrenck Notzing, Prof. James, and Prof. Sidgwick to superintend the work in Russia, France, Austria, the United States, and England.

The Committee on Hypnotism found that it had much the most work before it, and met on every morning of the Congress, besides occupying much of the time in the afternoons. It was very regularly attended by some 40 members, as well as by some large additional numbers occasionally in the afternoons. On the first morning Professor Delboeuf (of Liège) was asked to take the chair for the day.

Professor CHARLES RICHTER brought forward a discussion of the most desirable terminology. He had drawn up with M. P. Brissaud definitions of most of the words commonly used. Hypnotism, he said, was a word introduced by Braid, and should be defined as a state of somnambulism induced by physical causes; whilst magnetism was a similar state due to the action of special influence or will. Somnambulism was a condition analogous to sleep, but differing from it in retaining more signs of external impressions from the surroundings; and distinct from a normal waking state by an alteration of personality and a complete amnesia. It might be idiopathic, or artificially induced. When idiopathic, it was correctly a pathological condition most frequent in young subjects, and generally coming on in the course of natural sleep. When artificial, it was sometimes due to some manipulations called "magnetic," whose action was ill-defined, sometimes to a suggestion, sometimes to a physical action, such as fixing the eyes on a bright object, etc., and most frequently to a combination of several of these causes. "Animal magnetism" was a phrase that was in common use in various meanings, and was best applied generally to all the causes which induced somnambulism.

Exact definition such as would suit the wishes of a large meeting was naturally not found easy to frame, and Professor LIÉGEAIS urged that the term "Animal Magnetism" should be given up altogether, as it often led to the false impression that there was something in common between the phenomena of hypnotism and the phenomena of magnetism now accurately known, which was admitted by all physicists to be a mistake.

Professor BERNHEIM thought that our knowledge of what were the limits of hypnotism was at present too imperfect to allow of any complete definition, but was inclined to retain "animal magnetism" in the description of some past phenomena, of which we could not now ascertain the complete conditions.

After some hours of discussion, it was decided not to sanction the use of "hypnotism" and "animal magnetism" as synonymous terms, and the feeling of the meeting was in favour of employing hypnotism in future for a large group of symptoms, of which the exact limits would need much further study.

On the following morning (August 8), when M. Ballet was in the chair, M. OCHOROWICZ read a paper on "La Sensibilité Hypnotique." It could not be admitted that all persons were hypnotizable. The extent of their susceptibility could be shown by various standards, viz.: (a) the readiness with which they could be hypnotized; (b) the depth of sleep which could be obtained; (c) their relative sensitiveness to suggestion when in a hypnotic state; and (d) the varied character of the hypnotic symptoms in the same subject. He had come to the conclusion that variations of susceptibility were innate, and in some cases at least hypnotism could not be reached anyhow. He showed a hypnoscope which he had himself invented, and often used, and which consisted in a bar magnet bent into a thick ring and worn on one finger. When

this had been worn for a few minutes the finger often became cold and stiff, and that was, in his opinion, a valid test of the susceptibility to hypnotism whether the phenomenon was produced by suggestion or by magnetism.

Professor BERNHEIM had found, after a very wide experience, that a few people were at least very difficult, and perhaps impossible, to hypnotize. Some of these were to be found among the hysterical patients, and he did not at all agree with some authorities who were inclined to think that hysteria and susceptibility to hypnotism went together. The educated classes were more difficult to hypnotize than the uneducated.

Professor CH. RICHTER quite agreed in these remarks, and thought we might add that some races, *e.g.*, French and Italian, were much more susceptible than the English and German, but considered a much wider observation on this point necessary.

Professor DELBOEUF had found about 75 per cent. of all classes in Belgium hypnotizable.

Professor SIDGWICK suggested that it was advisable to make sure first whether all hypnotizers had equal power.

Professor FOREL (of Zürich) had found no difficulty in hypnotizing about 85 per cent. of the Swiss on whom he had tried, and Wetterstrand in Sweden, and van Renterghem and van Eeden had met with about the same results in Amsterdam.

Professor CH. RICHTER thought it almost impossible to answer Professor Sidgwick's question, although it was a very important and a very complex one. He thought it probable that there were differences between agents as well as between percipients.

Mr. F. W. H. MYERS described experiments devised to cut off the subject from any communication by the known senses with several experimenters who held their hands equally near several of the subject's fingers, contact being strictly forbidden, and the observations varied in several ways. Under these conditions a particular experimenter—the only one who could hypnotize him—was found to succeed in stiffening the finger near his hand so very much more frequently than would have been possible by chance, and as he considered fraud excluded by carefully arranged conditions and frequent experiments in private, he was obliged to conclude that there was some specific influence, of whose exact nature we were as yet ignorant. In the experiments there had been no hyperæsthesia to ordinary sensations.

On the morning of Friday, August 9, M. BERNHEIM took the chair, and M. CH. RICHTER introduced a description of the conditions altering the personality, commenting on the difficulty of setting the limits to suggestion, and ending by calling attention to some evidence, which was gradually increasing, of telepathy, or influence at a distance, and mental suggestion or thought transference without communication through any of the known senses. He did not think any such theories should be lightly adopted, but considered that the evidence was worth attention.

Professor SIDGWICK thought the cases of (*a*) animals, (*b*) babies, and (*c*) persons at a distance offered opportunities where suggestion of all kinds might be excluded by adequate care.

Professor BERNHEIM himself maintained that suggestion was an adequate hypothesis to explain the facts at present proved. The conditions produced in animals and considered hypnotic, he preferred to term cataleptic. With some babies at the breast he had seen M. Liégeois' great influence, but in them he thought the influence of suggestion might begin at any age, however early.

Professor DANILEWSKY went on to read a long and careful paper on hypnotism in animals, which he had produced in many, from the shrimp and crab upwards to the guinea pig and rabbit. Among many details he pointed out that when involuntary rotatory movement had been induced by injury to

the semi-circular canals in the higher animals it could be stopped by this hypnotism.

On the last day of the Congress, Saturday, August 10, Professor ESPINAS, of Bordeaux, was asked to act as Chairman, and he called on M. Babinski to explain the views of the school of the Salpêtrière.

M. BABINSKI said he was glad to do so, though they had been lately published in the *Arch. de Neurologie*, 1889, Nos. 49 and 50. They did not admit that hypnotism was confined to hysterics, but only best studied in them. He admitted that he had seen little of hypnotism in non-hysterical patients; but he could not admit that all the phenomena were due to suggestion, as for instance anæsthesia often was found when it was not suggested. He had heard it said that M. Charcot's three stages of lethargy, catalepsy, and somnambulism were only to be found at the Salpêtrière, but he could call Tamburini, Seppili, Vizioli, and others as witnesses to the contrary.

Most of the speakers who followed him considered it an incomplete study of hypnotism to observe it only or chiefly in the hysterical cases, when the inferences were specially difficult.

Mr. F. W. H. MYERS described some experiments in thought-transference, which he had carried out with hypnotized subjects, when the experimenters, who alone knew the piece of knowledge sought (such as a number drawn by accident from a bag, or card from a pack) could be carefully isolated from all communication by the senses at a distance from the subject. A large amount of varied experiment had shown with a few subjects such an immense superiority of correct guessing to what could be calculated by rules of chance, that he thought there was certainly some other agency at work than hyperæsthesia, or fraud, or chance.

Professor CH. RICHTER had been for some time familiar with these experiments, and had conducted many like them himself, and considered them of great importance, as thought-transference of this kind, if true, was a very great truth.

Professor SIDGWICK and Professor DELBOEUF both agreed in the importance of carrying out such experiments carefully on a large scale.

After some discussion as to the best place of meeting of the next Congress of Experimental Psychology in 1892, it was agreed that it should be held in London, in August, 1892, and an *ad interim* Committee was appointed, who were to meet about Christmas, 1891, to complete the arrangements. The Committee were chosen only from those present in Paris, in order to secure immediate consent, and consist of MM. Beaunis, Benedikt, Bertrand, Bernheim, Danilewsky, Delboeuf, Espinas, Forel, Ferrari, Galton, Gley, Grote, Gruber, Herzen, W. James, Lombroso, Marillier, Münsterberg, F. Myers, Nieglich, Ochorowicz, Ribot, Ch. Richet, von Schrenck Notzing, Sidgwick, and Sperling.

A. T. M.

BEER IN ASYLUMS.

Dr. Hearder, in the Twenty-third Report of the Joint Counties' Asylum, Carmarthen, says:—"It is now eight years since you ordered that the use of beer as an article of diet should be discontinued in your asylum. There was at that time only one county asylum in which the dietary did not include beer. At the present time malt liquor is included in the dietary of only a decided minority of asylums, and this number is growing smaller year by year. In this asylum the change has been decidedly and absolutely beneficial; it was effected with the entire concurrence of the whole staff of attendants, and it was not accompanied by any friction or discontent amongst the patients. A few years previously, in 1876-7, the use of alcoholic stimulants, in the treatment of disease and as an

addition to the diet of the feeble and aged, was gradually and almost completely discontinued. In this change also, there can be no doubt, we made a decided advance in rational treatment. We effected no saving in money, because more than an equal expense was incurred in providing substitutes for these alcoholic extras in the form of milk and eggs, our expenditure for eggs alone being considerably over £100 per annum. Our average annual expenditure for wine and spirits, for the 11 years ending 1876, was £90, while our average number of patients was 255. For the last 11 years, with an average population of 460, our wine and spirit bill has averaged only £12 per annum. Comparing then our mortality for these two periods, we find that during the first period of 11 years our average annual mortality was 9·7 per cent.; and during the last 11 years it has been less than 8·1 per cent. I would not be understood to hold that this diminished mortality resulted entirely from our abstinence from alcohol, there were doubtless many other influences at work, but we may fairly claim that our patients have not suffered thereby. The disuse of alcoholic stimulants is being gradually carried out in asylums in general. In 1876 the average cost per head for 'wine, spirits, and porter' was 6s. 6d.; in 1886 we find it had been reduced year by year to a half of this amount."

FEMALE PHYSICIANS AND THE STATE HOSPITALS FOR THE INSANE IN THE UNITED STATES.

"It is well that reforms come slowly; in this way variations from recognized orthodox methods sometimes demonstrate that even radical changes in established customs may be wisely considered, perhaps even adopted.

The Legislature, "for the better regulation and treatment of female insane in the asylums and hospitals of the commonwealth," by Act of June 4, 1879, provided, "that in all hospitals and asylums now built, or hereafter to be built, and under the control of the State, and in which male and female patients are received for treatment, the trustees of said asylums or hospitals may appoint a skilful female physician, who shall reside in such asylum or hospital, and who shall have the medical control of said female inmates, who shall report to the superintendent and also to the trustees." This law went into effect as to asylums and hospitals then built in one year after the passage of the Act.

The presence in the medical profession of well-educated, judicious, and experienced female practitioners has encouraged the managers of two of our State hospitals to entrust the treatment of their female insane to women.

The trustees of the State Lunatic Asylum at Harrisburg, "in the full conviction, and after mature consideration, that the comfort, welfare, and restoration to health of the female patients in this hospital would be promoted by the exercise of the power conferred upon them by this Act, on July 8, 1880, elected Margaret A. Cleaves, M.D., of Davenport, Iowa, to have the medical control of the patients."

The term for which Dr. Cleaves was elected having expired on August 31, 1883, when she declined to be a candidate for re-election, her position was filled by the appointment of her assistant, Dr. Jane K. Garver, who took charge September 1, and continues in office.

The trustees of the State Hospital for the Insane at Norristown, on the opening of that institution, February 18, 1880, adopted "the system of a division of the medical supervision by placing over the men a male resident physician, and over the women a female resident physician, making each responsible for, and requiring them to devote their whole time and single attention to, the care of their respective patients."

It is most satisfactory to note the uniform generous favour, the uninterrupted, cordial support which has been given to these two women physicians at the Harrisburg and Norristown hospitals, who have so fully shown their ability in

every respect to occupy such prominent position, with all the varied and arduous responsibilities, both executive and professional.

There ought to be no question in regard to the female insane in all our State institutions, in each of which there should be employed a female gynæcologist. Recent advances in medical science demand that all examinations, which not infrequently are required to be performed upon the female insane, should be conducted by one of their own sex.

The advantages and opportunities now extended in the colleges and hospitals in which women are educated are so thorough and complete in didactic and clinical instruction, especially so in regard to diseases of women, that there need be no difficulty in securing competent medical graduates, who ought to have charge of this part of the medical work in all our State institutions. It will be simply a question of time until every hospital will gladly avail itself of such an addition to its staff. Various causes have too long prevented this, but the advance cannot be long withheld, the advantages are too overwhelmingly patent, the medical superintendents and the trustees of the hospitals are too progressive and enlightened not to avail themselves of this much-needed and now well-recognized reform.

If such radical changes have been introduced into private hospitals for the insane with advantage, how much more appropriate are they likely to be in institutions built, supported and watched over by the taxpayer. At the Pennsylvania Hospital for the Insane the entire gynæcological work, medical and operative, has been for many years exclusively under the charge of the female practitioner. The late Dr. Thomas S. Kirkbride, ever mindful of the great responsibility of his position to the patients under his charge and to the public in general, promptly, when it was found that competent women could be secured to attend to the local maladies of his female patients, relinquished all such treatment into the hands of a graduate of the Women's Medical College. The same course has been pursued by Dr. John B. Chapin, since his election as superintendent and physician-in-chief in 1884, with entire satisfaction to him and to the board of management."

Dr. Gerhard in Annual Report of the Harrisburg Asylum, Penn., U.S.A.

ASSOCIATION EXAMINATIONS.

In our last number we gave the result of the examination for the Certificate of Efficiency in Psychological Medicine in England, Scotland, and Ireland, but the space at our command did not allow of our giving the written questions asked by the Examiners. We now supply them:—

ENGLAND.

JULY 18, 1889.

Examiners:

Dr. BLANDFORD and Dr. RAYNER.

PASS EXAMINATION.

1. Describe the various modes of feeding in the refusal of food by insane patients, and the diet you would prescribe. In what cases would you consider it necessary to feed immediately, and in what would you wait?
2. Describe the most common development of insanity occurring during lactation, and the treatment to be adopted in such cases.
3. Describe the physical symptoms in general paralysis of the insane.
4. Are hallucinations of sight and hearing symptoms of insanity? Do they occur in the sane? Can you distinguish the one class from the other?

5. What is the immediate cause of death in cases of acute mania, acute melancholia, and general paralysis? What measures should be taken in order to avert it in each of these forms of insanity?
6. State your views as to the connexion of syphilis with insanity, especially general paralysis of the insane.

SCOTLAND.

JULY 17TH, 1889.

PASS EXAMINATION.

Examiner in Edinburgh : Dr. YELLOWLEES.*Assessor* : Dr. CLOUSTON.*Examiner in Aberdeen* : Dr. RORIE.*Assessor* : Dr. REID.

1. What are the circumstances which chiefly affect the prognosis in a case of insanity?
2. Define an illusion, a hallucination, and a delusion, and give an illustration of each. Mention the different kinds of hallucinations which are most frequent, and which are the most unfavourable as regards recovery.
3. In what forms of insanity does violent excitement usually occur, and how is it best treated?
4. Mention the forms of insanity which may occur in connection with physiological epochs in the life of a woman, and give a short sketch of each.
5. Mention the forms of insanity in which motor symptoms *necessarily* occur, stating the kind of motor symptoms to be expected in each, and their relationship to the mental symptoms.
6. What medico-legal duties may devolve on the medical attendant in a case of insanity? And what are the most important points to be attended to in writing a certificate for placing the patient in an asylum?

IRELAND.

JULY 31ST, 1889.

Examiners :

CONOLLY NORMAN, F.R.C.S.I., and RINGROSE ATKINS, M.A., M.D.

PASS EXAMINATION.

1. Give some of the most important classifications of insanity which have been put forward, and state, with your reasons, which you consider the soundest and most practically useful.
2. Describe in detail how you would conduct the clinical examination of an insane patient, in order to determine the possible causation, and the probable outcome of the case, physically and mentally.
3. Mention the different clinical groups of "States of Mental Depression," and sketch briefly the prominent distinguishing features of each.
4. What form of Mental Disease is the insanity occurring at the period of adolescence, likely to eventuate in? Describe its characteristics as regards its symptoms, course, and prognosis.
5. An insane patient has been refusing food—What indications would guide you in forming an opinion that the time had arrived when artificial feeding should be had recourse to?
6. Mention some of the Hypnotics more recently introduced in the treatment of the insane; state the advantages or disadvantages of each; their doses, mode of administration, and the indications which call for their exhibition.
7. Discuss the following points connected with General Paralysis of the insane:—(a) general diagnosis; (b) importance of early diagnosis in medico-legal aspect; (c) proposed clinical division into stages; (d) varieties of mental symptoms.

8. Sketch a case of "Circular Insanity." What is the prognosis in such a case?
9. Define the following terms:—Delusion, hallucination, illusion, imperative concept.
10. You are called on to give an opinion as to testamentary capacity in a person of advanced age. What indications would guide you in forming the opinion that senile insanity existed?
11. You examine a prisoner committed for an act of violence. Mention the circumstances which would induce you to believe that the person was—
(a) feigning insanity; (b) had acted under insane impulse; (c) suffered from transitory insanity; or (d) from moral insanity.
12. What is *durhæmatoma*? In what affections is the condition most commonly found, and what are the theories as to its essential nature?

THE NON-RESTRAINT QUESTION.

We were under the impression that the discussion between Dr. Yellowlees and Dr. Alex. Robertson had exhausted itself in our last number. Each physician had fully and freely expressed his views on a subject in regard to which they honestly hold different opinions. To continue the discussion would, we think, be little more than a repetition of the same statements, if not the same words, without adding any real force to the arguments employed by these able combatants. Dr. Robertson, however, wishes to make it unmistakably clear that he regards "locked gloves" as one form of mechanical restraint. As he places in the same category "side arm dresses" and the "protection bed," and as Dr. Yellowlees recommends their use in exceptional cases, Dr. Robertson maintains that he was not in error in referring to "the considerable use of mechanical restraint" advocated by him. Another statement Dr. Robertson wishes to make, which is, that although he has been connected with an asylum which during the last five years has not had a larger number of patients than 125, it was, during many years previously, licensed for 248 patients, a large proportion of whom were dangerous, both in respect of suicide and homicide.

Correspondence.

TO THE EDITORS OF *The Journal of Mental Science.*

SIRS,—I was unavoidably absent from the Annual Meeting of the Medico-Psychological Association, but have read with great interest in the October number of "*The Journal of Mental Science*" the very able Address of the President and the subsequent discussion on the subject which is probably uppermost in the minds of all asylum medical officers and others interested in the treatment of insanity at the present moment, viz., the advisability of establishing curative hospitals for occurring cases of insanity and for teaching purposes.

I think the tone in which the President alluded to the misrepresentations in Dr. Batty Tuke's paper in a recent number of the "*Nineteenth Century*" was most conciliatory; indeed, far too much so, and I was glad to find one or two speakers after him, notably Dr. Clouston, much more decided in disapproval. However, leaving Dr. Batty Tuke to digest the very cogent and wise refutations of his assertions about the total absence of genuine medical spirit in asylums, in the President's Address, I beg to note a few con-

siderations which have occurred to me, and which were not alluded to in the discussion. I would first say that I am young enough not to be "steeped in asylum tradition," and on the other hand, old enough to count over ten years' acquaintance with lunacy work in four English asylums, so that I may be said to approach the subject with an open mind, with ideas uncrystallized by years of routine, yet with experience enough to weigh and criticize existing provisions for the insane and suggested changes therein.

Far too much, I think, has been made of the supposed fact of insanity being an ordinary bodily disease—a disease of the brain, as, say, acute yellow atrophy is of the liver, a disease which can be treated in a hospital ward like any bodily disease; the two are most essentially different and require essentially different provision for their management. To erect hospitals on ordinary or on special hospital lines in London, Birmingham, and other large towns for occurring cases of insanity would, in my opinion, be most prejudicial to the patients in them; it would be impossible to acquire sufficient land for outdoor exercise, work and amusement, which we know to be so beneficial to patients. Prison high walls would be necessary to prevent the patients becoming a shame to themselves and a public nuisance to their neighbours. Moreover, insanity cannot be studied or treated in any such town building; patients cannot, or at all events should not, be submitted to the same methods of examination, or times and places of examination as ordinary hospital patients. I can just fancy a case of acute mania or melancholia being percussed, auscultated, the sphygmograph, thermometer, plethysmograph, etc., used upon him, his history, demeanour, thoughts, habits, delusions, hallucinations all laid bare, probed, and discussed before him at one examination to a crowd of students, and watched incessantly afterwards by "chiels taking notes" of his every word and action. Surely a moment's consideration will bring conviction to the mind that the whole data of mental disease are different from those in bodily diseases, and that lunacy practise cannot, and need not, be conducted on ordinary hospital lines. What the great majority of patients require is letting alone; the very defects in their intellects should not be referred to before them without a sympathetic tact, and he is the best physician to the insane who can by residence among them casually and by degrees ascertain their mental and physical condition, taking part in their work, amusement, and daily life from day to day and month to month. All this is incompatible with the cold-blooded examination of an ordinary hospital patient in a clinical theatre or bedside, which I understand to be the scheme in the suggested teaching hospitals.

Three years ago I read a paper at the Brighton meeting of the British Medical Association at the same time as Dr. Strahan, advocating a curable hospital or block in or near the existing asylums. I advocate this no longer, and further thought and experience have entirely changed my views. Who are to be the inmates of such hospitals? Take a year's admissions to any county asylum and analyze them. We have so many senile cases—these go to an infirmary ward among similar cases; so many congenital cases—these, if children, go to an idiot school ward, if adults, to one of the wards for chronic cases; then the epileptics, who go to an epileptic block; then the bodily-ill, who are located in the hospital ward; then the manifestly chronic delusional and demented cases of long standing, who are sent to appropriate chronic wards. And what have we left? Cases of acute mania with or without general paralysis and acute or recent melancholia, which, after all, are a small proportion of our total admissions, as alone suitable for our suggested hospitals. Apart from the fact that the great majority of such cases recover under present arrangements, it surely cannot be urged, at least in our present state of knowledge or in any at present conceivable advance in knowledge, that the highest general or special medical skill brought to bear on a case of acute mania will prevent it running its course any more than it can prevent the evolution of any acute pneumonia, meningitis or typhoid.

Then consider the inevitable pandemonium from the aggregation in one build-

ing of a great city's acute maniacs, for we must remember complete individual isolation is alike inadvisable and impossible. The melancholia cases, again, of all kinds, from the most suicidal and frenzied to the stuporose hypochondriacal and hysterical, are surely not cases which one would place together either among themselves or within sight or hearing of their friends at the other end of the gamut of mental disorder. Individual attention to the recent or acute cases is a good thing, but with melancholiacs it may be overdone; it has generally been overdone at home before the cases come to the asylum. Nothing so soon restores hypochondriacal, hysterical and self-centred female melancholiacs as to merge their self-important individuality in a well-disciplined ward of 20 or 30 general cases. What more powerful stimulant to healthier thoughts than the example of order, discipline, amusement, or sewing or laundry work, which is all-pervading in any well-managed county asylum? Inveighing as I do against the principle of isolation and separate treatment in general, I readily admit that certain cases are fit and proper ones for individual and separate care, but for this very small proportion I am sure any county asylum could easily devote a room or two from its existing accommodation. Further, while sure of the futility of establishing curable hospitals, and adverse to a selected collection of patients being sacrificed to stock a special teaching hospital, I am not altogether complacently satisfied with existing arrangements. For example, I think the medical staff of an asylum should be more especially skilled. This could be arrived at by appointing as assistants men only who had devoted their time before or after graduation to studies bearing on the specialty—diseases of the brain and nervous system, metaphysics, and also practical and histological pathology. Just as it soon will be illegal to appoint any medical officer of health who does not hold a diploma in State medicine, so it might be made illegal to appoint any asylum medical officer who did not possess some such qualification as our Society's certificate.

Then most men will admit that the nursing in our asylum infirmaries is not at all what it should be. Care and attention, I don't doubt, ensure comfort for our sick; but this is not skill, or at least only a part of it, which should be supplied by trained hospital nurses. Then, structurally, our infirmaries are most defective, even in our modern asylums, and the draughty, ill-ventilated single rooms or dormitories are useless in which to treat pneumonia and similar bodily diseases. Also, I do not think asylum doctors make enough use of the power, set down in most asylum rule-books, possessed by Medical Superintendents, of "calling to their aid any outside medical practitioner." Surely in most towns there are specialists in neurology, surgery, and gynæcology whose aid would be often very valuable. The treatment of insanity in an asylum with these improvements then—coupled with all the usual resources of a county asylum, such as fresh country air and exercise, associated amusements, the benefits of example in workshops, farms, laundries, and sewing rooms, not to mention the opportunities for testing a patient's fitness to resume the ordinary duties of life by trial in a convalescent ward, where there may be but one, or even no attendant—is, I say, to my mind the wisest scheme and the one most conducive to recovery that can be devised.

With regard to teaching medico-psychology, I cannot say I am very sanguine about the benefits to be derived from it. Personally, as a student in Dr. Clouston's class at Morningside, I was intensely interested in the systematic and clinical lectures there given, but—and this may be my own fault—if my knowledge of the subject had ended with the course, I should have known very little about it. Be this as it may, however, I consider no special teaching provision not already available is necessary; every town big enough to have a medical school has one or more asylums in or near it, the heads of which would, I am sure, be most willing and able to give instruction.

The truth is, all this stir about new methods of dealing with the insane arises

from an exaggerated idea of the number of huge asylums which have from time to time to be built. No sooner had the London County Council come to office than they found that their newest and best asylum must be at once enlarged to double its size, and that a large new asylum for 2,000 patients must be built. I fail to see anything alarming in this; population increases, chronics accumulate—had ordinary hospitals to retain their incurables, they would rival public-houses in number—hereditary taint increases insanity with more than arithmetical progression, and after all, we have only about 150 asylums for the mentally unsound of 40,000,000 people.

It is not probable that we can ever diminish the insane by any increase of recoveries; indeed, *the converse is more probable*, but it is conceivable that by improved food, air, dwellings, and knowledge of sociology and hygiene, including temperance and morality, we may *prevent* insanity to a certain extent. All real advance in medicine of solid demonstrable advantage to the community at large has been—as in the case of small-pox and zymotic diseases generally—not so much in the increased cures in individual cases, but in the prevention of their incidence as a whole.

Yours faithfully,
 DAVID G. THOMSON, M.D.,
 Medical Superintendent,
 Norfolk County Asylum.

Nov. 7th, 1889.

HYPNOTISM OF THE INSANE.

TO THE EDITORS OF *The Journal of Mental Science*.

SIRS,—I should like, with your permission, to call attention to the dearth of information in respect of attempts to produce the hypnotic state in the insane. At present it is impossible satisfactorily to reply to those who somewhat imperiously demand our adhesion to their *ex cathedra* utterances upon this subject, which they declare to be barren, unprofitable for investigation, and, in short, nonsense. We require definite information, and painstaking inquiry can alone furnish us with such. Experience teaches that it is advisable for the individual operator to limit his attempts to a few patients, repeating them in those patients a reasonable number of times, until he can, with some justice, abandon hope of success. The necessary procedure is, I certainly think, fatiguing, as is any task requiring concentrated attention; hence a great deal cannot be expected of one investigator. But if we could obtain the sum total of the work of numerous investigators, in different asylums, our case would be more presentable. The lead has been taken by Bethlem Hospital, and I believe that an account of the trials there will be published. But I am unaware of other attempts in this country. Briefly, we require to know—(1) Whether an insane person can be hypnotized; (2) If so, is he amenable to suggestions made in the hypnotic state; (3) If so, does he, in the waking state, carry out such suggestions? I observe that Heidenhain, in the last edition of his work on Hypnotism, quotes a statement of Dr. Jænicke to the effect that “lunatics” cannot be hypnotized. Forel also is mentioned (“*Zeitschr. f. Psych*”) as regarding the “field of psychoses” as “extremely unfavourable” for the therapeutical employment of Suggestion. Binswanger (quoted in the same periodical) considers that attempts on the insane are likely to be productive of “more harm than good.” Lastly, Dr. Sperling (“*Verhandl. Psychiatr. Vereine*”)

dwells upon the poor outlook of hypnotism in the insane. On the other hand M. Voisin appears to have had large success. It is time that we had some experiences of our own wherewith to support or confute these foreign views.

During the past month I have endeavoured to hypnotize five patients in this asylum, with one success (*i.e.*, with regard to the production of hypnosis). In a future number of the Journal I hope to be able to record these attempts, with their results.

Faithfully yours,

EDWIN GOODALL, M.D., M.R.C.P.

Wadsley Asylum, Sheffield.

[We are glad to be able to state that Dr. Percy Smith, of Bethlem Hospital, and Dr. Myers, will contribute to the next number of the Journal a series of cases of insanity in which hypnotism was tried. We hope Dr. Goodall will make the hypnotic treatment of the insane a special study. It must be borne in mind that failure counts for little against a number of really successful cases. The different results might be caused by the inefficiency of the operator in the former instance.—EDS.]

Appointments.

BEAVER, R. A., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer to the Lancashire County Asylum, Rainhill.

BRODIE, R. C., M.B., appointed Junior Assistant Medical Officer to the Glasgow Royal Asylum.

CAMPBELL, A. W., M.B., C.M.Ed., appointed Junior Assistant Medical Officer to the County Asylum, Shrewsbury.

CHAMBERS, J., M.A., M.D., appointed Senior Assistant Medical Officer to the Montrose Royal Lunatic Asylum.

DOBBS, C. J., M.R.C.S., appointed Junior Assistant Medical Officer to the Hants County Asylum.

DONALDSON, W. J., B.A., M.B., B.Ch.Dub., appointed Senior Assistant Medical Officer to the Camberwell House Asylum.

FARQUHARSON, W. F., M.B., C.M.Ed., appointed Junior Assistant Medical Officer to the Counties Asylum, Carlisle.

FENWICK, J. C., appointed Clinical Clerk to the Northumberland County Asylum.

MONTRITH, J., M.B., C.M., appointed Assistant Medical Officer to the Dorset County Asylum.

OSWALD, LANDEL R., M.B., appointed Senior Assistant Medical Officer to the Glasgow Royal Asylum.

ROSS, D. M. M., M.B.Ed., appointed Assistant Medical Superintendent to the Counties Asylum, Carlisle.

ROWE, E. L., L.R.C.P. and S.Ed., appointed Medical Superintendent to the Ipswich Borough Asylum.

SMITH, TELFORD, B.A., M.B., B.Ch.Dub., appointed Assistant Resident Medical Officer to the Royal Albert Asylum, Lancashire.

WARD, P. J., L.K.Q.C.P.I., appointed Resident Assistant to the Ballinasloe District Asylum.

WATSON, W. R. K., M.B., C.M., appointed Resident Clinical Clerk to the City Asylum.



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VOL. XXXVI.

PART 1.—ORIGINAL ARTICLES.

On the Psychical Disorders of Peripheral Neuritis. By JAMES ROSS, M.D., LL.D., F.R.C.P., Physician to the Manchester Royal Infirmary, and Joint Professor of Medicine to the Owen's College.

GENTLEMEN,—I feel it a great honour to be asked to address your learned Society, and yet it is not without misgiving that I have undertaken the task. I am, indeed, somewhat abashed at the temerity which has led me to discuss Medico-Psychological problems before such masters of the subject as I see before me, but I am in some measure reconciled to the position in which I find myself by the consideration that the kindness which induced my friend, Mr Mould—I presume, with your sanction—to ask me to address you, will be extended so far as to incline you to overlook my shortcomings. It is also possible that an exchange of ideas between the general physician and the alienist on the great subject of mental disorders may be productive of good to both. For between complete sanity and that degree of mental derangement which the law recognizes as insanity there is a wide border-land of disordered physical functions, in which the opportunities of the general physician for making observations may even be greater than those of the alienist himself, and it is from this border-land chiefly that I have culled the few observations which I propose to present to you to day.

You are aware that in recent years certain diseases which at one time were supposed to differ widely from one another have, by the name of peripheral neuritis, been brought together under one common description and one common pathology. The most remarkable characteristic of these diseases is that, with the exception of a few cases which in our ignorance we call idiopathic, they are generally caused by the action of some

poison. The poisons which cause neuritis are animal poisons, such as the poisons of diphtheria, septicæmia, typhoid and other fevers, syphilis, and tubercle; vegetable poisons like morphia; diffusible stimulants such as alcohol, bisulphide of carbon, di-nitro benzole, and the fumes of naphtha and other agents used in special manufactures; endogenous poisons, like those generated in rheumatism, gout, and diabetes; and metallic poisons, such as lead, phosphorus, arsenic, and mercury. The phenomena of multiple neuritis are also found to accompany many diseases, like cancer, Addison's disease, exophthalmic goître, chorea, chlorosis, hæmoglobinuria, pernicious anæmia, and other diseases which are attended by great impoverishment of the blood. Some degree of neuritis probably also occurs after severe shocks to the nervous system from injuries or moral causes. Whatever may be the cause of this form of neuritis, it is liable to be accompanied by psychical disorders which have in all cases a certain family likeness, although the best marked examples of these mental aberrations are met with in the neuritis, which results from chronic poisoning by morphia, and by alcohol and the other diffusible stimulants. I shall not occupy your time in describing the sensory, motor, vasomotor, and trophic symptoms of peripheral neuritis; but before entering upon the consideration of the psychical disorders, I will, with your permission, make a few remarks upon the meaning which ought, in my opinion, to attach to the terms hallucinations, illusions, and delusions. By the first two is meant a disorder of perception, and by the last, a disorder of the reasoning powers. Taking the word *delusion* first, it may be said to be a *false belief*, using the term *belief* in the sense of an assent to a proposition, the truth of which can only be established by indirect evidence. Every false belief, however, is not a delusion. In order to constitute a delusion, the belief must be held in the absence of any evidence to give it plausibility, and consequently it must be added that a delusion is a *false and groundless belief*. But even as thus amended, the definition is insufficient. An obstinate man often holds a false belief in the absence of any evidence in its favour, but in order to constitute it a delusion, it must be held in the face of the most cogent opposing arguments, and of all adverse experience. It is, indeed, of the very essence of a delusion that it cannot be corrected by argument or experience; and consequently this factor must be included in the meaning of the term, and a delusion may now be defined as a *false, groundless, and incorrigible belief*. From experience, it is known that

delusions relate to matters which concern the patient personally, but this circumstance is one which it is hardly necessary to include in the definition.

Turning now to the disorders of perception, we find that in every perception there are two factors, namely, presented feelings, or sensations, and represented feelings, or a judgment as to the cause of these sensations. Now, in hallucinations, both the presented and represented feelings are unreal, inasmuch as a perception or a semblance of a perception arises in the absence of any external cause; while in illusions the presented feelings are real in so far as they are always caused by some external object or event, but the represented feelings or the judgment formed of their cause is erroneous. Hallucinations are of various degrees, and the more they impose upon the subject as realities, the greater the disorder of mind indicated. For practical purposes, they may be divided into three kinds: (1) faint; (2) vivid but corrigible; and (3) vivid and incorrigible hallucinations.

The *faint* hallucinations generally present themselves as the patient is settling down for sleep. Most people who use their eyes in reading before going to bed, and especially with gas light, see a bright golden cloud before their eyes on closing them, and in the early stage of hallucinations, representations of faces, houses, battle scenes, and other images appear in this cloud. The representations, however, appear like paintings or photographs of actual persons and scenes, but never impose upon the patient as realities. Some patients describe these hallucinations as consisting of *forms or shadows*, rather than of pictorial representations. The condition, so far as I can judge, is this: as the subject is falling asleep, the thoughts wander to some event or person around which strong emotions of love or hatred cluster, and the outline of the figure of a dead friend or of a detested enemy appears before the mind with startling vividness, just as occurs in dreams. The hallucinations of hearing of the early stage appear also as the patient is becoming composed for sleep, and consist most usually of strains of music or of voices, but which are soon recognized as being of subjective origin. The early hallucinations are often pleasing in character, and the patient may be much entertained in observing them, but with the progress of mental irritability they are apt to assume horrid shapes; the faces become distorted and make grimaces or appear like the dead; or the hallucinations represent loathsome animals; whilst the music of the first period is apt to be replaced by disagreeable noises and distressing cries.

In the *second* degree of hallucinations, the subject, with senses fully awake and in full light, sees images or hears voices which have almost all the vividness of reality, but which at the same time the patient, by a little observation, proves not to be real. Some persons possess the faculty of reproducing a scene, once witnessed, with photographic exactness and with almost all the vividness of reality, while others have a similar command over sounds, reproducing in imagination musical strains with wonderful vividness and correctness. These are the endowments of genius. There is, however, a counterfeit endowment of this kind which, instead of indicating genius, may be taken as a sign of the insane constitution. I read a short time ago in a French journal—the reference to which I regret having forgotten—of a painter, who said: “When a person comes to me for his portrait, I look at him intently, observe his expression, colour, figure, and dress; and afterwards, when I want to work, I think of him and see him as if he stood before me, and so paint him.” This man’s brother was in an asylum, and he afterwards became insane himself. In the visual disorders of this stage, the patient sees the image of a person, animal, or other object with all, or almost all, the vividness of reality, but such facts as that the figure is seen to glide in air instead of walking on the ground; that its motions are found to be dependent upon the movements of the subject himself, and especially upon the direction in which he turns his eyes; that it transmits light more freely than would a solid body; and, above all, that it eludes the grasp, soon convinces the patient that the representation before him is not a reality. It is after applying tests of this kind to the phantom dagger that Macbeth exclaims:

“I have thee not, and yet I see thee still,
Art thou not, fatal vision, sensible
To feeling as to sight? Or art thou but
A dagger of the mind, a false creation,
Proceeding from the heat oppressèd brain.”

Of two persons who are the subjects of the hallucinations of this stage, one may, by education, have a superstitious belief in the existence and power of spirits, and he will think that the hallucination is a ghost, while the other, educated in the sceptical opinions of the present day, recognizes that the hallucination is a product of his own mind. Of those two persons, the first may represent a lower stage of mental development than the second, but it is the lower stage of a defective education, and so far as the hallucination is to be taken as a sign of mental disorder, and an indication of approaching insanity, the two

stand upon a level. One of the most frequent auditory hallucinations of this stage is, that the patient, whilst walking, imagines he hears the footfall of a person coming quickly behind him, but on turning abruptly round, he discovers his mistake, and acknowledges that the auditory impression was the product of his own fancy. At other times, his thoughts are echoed in his ears as if they were spoken from without, so that it seems to him as if he were two persons. He is, however, still able to trace the connection between the thoughts passing through his mind and the audible words, and is thus able to correct his first impulse to attribute the sound to external agency.

In the *third* degree of hallucinations, the perceptions are so vivid, and the mental disorder which causes them so profound, that the subject believes in their reality, notwithstanding every persuasion to the contrary, and in the face of the most adverse experience. When this stage is reached, a belief in the reality of his hallucinations is not the sole mental disorder which is present. The patient entertains some impossible hypothesis to account for his disordered perceptions. When he has a perception of persons standing by his bedside, he believes that they are policemen coming to drag him to prison, ministers of justice come to execute vengeance upon him, or persons carrying on an intrigue with his wife, whom he accuses of infidelity, and although the images may appear to pass through a stone wall or through a key-hole when chased, he is none the less convinced of their reality. When the hallucination has reached this stage of incorrigibility, it scarcely differs in any respect from a delusion, and may, like it, be taken as a sure test of insanity. The auditory hallucinations of this stage consist mainly of voices, which seem to him to come from some external source, and not unfrequently assume the form of commands from heaven or some superior being, and when this stage is reached, in which a belief is entertained in defiance of all reason and experience, the hallucination again becomes merged in a delusion.

In an *illusion*, the presented elements of the perception are caused by some external object; but the represented elements fail to correspond with the reality. If the presented feelings of the illusions are, as in the case of a mirage, so like to the judgment—a lake—which the subject forms of their cause, that most healthy persons would form a similar judgment if placed in the same circumstances, then the illusion may be a sign of defective knowledge, but it cannot be held to indicate mental disorder. When, however, the presented elements are very unlike those

which would result from the object judged to have caused them, as when a patient on awaking in a hospital ward judges that the next bed with its occupant, is a cow grazing, then it will be at once seen that such a judgment could only have been formed by a mind greatly deranged or enfeebled. In a case like the example just given, the patient corrects his illusion by a little further inspection, so that only a temporary mental disorder is indicated; but when a manifestly erroneous judgment of this kind is persistently maintained in the face of all argument and experience, then the illusion becomes merged in a delusion, and may, like it, be regarded as a test of insanity. It will then be seen that although hallucinations and illusions differ widely from delusions in their origin, and in their character during the early stages of their development, yet in their extreme forms the two first merge into, and are, for practical purposes, indistinguishable from the last.

Let us now turn our attention to the psychical disorders of multiple neuritis. These may be divided into four stages: (1) a premonitory stage in which the special senses and imaginative faculties are liable to be exalted; (2) a stage of depression or melancholia; (3) a transition stage of mania or melancholia with excitement, or of convulsions passing on to (4) a final stage of dementia.

In the *stage of exaltation* the patient often suffers from hallucinations of the first degree. A patient suffering from a moderate degree of glycosuria told me that on closing his eyes for sleep he was much troubled with seeing all sorts of figures passing before him, chiefly representing soldiers and policemen in threatening attitudes. On several occasions he heard music as plainly as if someone were playing the piano in the next apartment, but on being assured by his attendant that no one was playing, he at once owned that the music was, like the visual representations, the product of his own mind. He never heard distinct voices. A young man aged 21 years, a steward on board ship, was under my care in the infirmary a short time ago suffering from well-marked symptoms of alcoholic paralysis, who gave a very vivid account of his hallucinations. As he closed his eyes for sleep a bright cloud shone before him, and in the midst of it appeared faces, which he spontaneously compared to photographs. These faces were never distorted or disagreeable, and he was much entertained in watching them. He was also subject to very vivid dreams, but they also were not often of a disagreeable character. This man appeared to have passed his waking hours in a

kind of fairy dreamland, but on being asked to describe the nature of his fancies he laughingly declined.

The effect of chronic indulgence in alcohol varies greatly according to the character of the subject. In all cases the intellectual powers are lowered. The patient becomes more absorbed with his own thoughts and less observant of what is passing around him, and more selfish and less qualified to discharge the ordinary duties of life; but while a man of timid and poetic nature is apt to direct the current of his thoughts to vain and vapid imaginations, a man of bold and intrepid character is apt to concentrate his thoughts round one or two great passions of revenge or ambition. The consequence of allowing the thoughts to centre upon one great passion is that the subject ceases to be interested in everything that does not seem to him to tend towards the realization of his aspirations and becomes intolerant of everything that seems to oppose them. A man in this state of mind will bear with equanimity, often with complete callousness, the greatest calamities of life, such as the death of his wife or children, so long as such events do not seem to cross the line of his ambition, but the most trivial incident that appears to run counter to the realization of his hopes evokes the most gloomy and painful emotions, and is apt to be met by a fearful outburst of mental irritability. Again, apparent success in the line of his ambition causes the mind to become unduly elated, and is likely to lead to extravagant conduct, sure to end in disaster. A character of this kind is finely sketched by Scott in "Waverley," in the person of Fergus MacIvor, and although the exciting events in which Fergus was one of the chief actors were well calculated of themselves to develop this exalted mental state in one of his ardent and ambitious nature, yet I cannot but think that the subject of the original study was one who had partaken pretty freely of alcohol, even although in those days he might have been regarded as a temperate man. Fergus was born and bred as a conspirator, and from his youth upwards all his pleasurable emotions clustered around the correlative ideas of revenge upon the Hanoverian dynasty, and the restoration of the Stuarts, carrying with it the glorification of Fergus himself as the chief actor in the drama. For the achievement of this idea he had planned and plotted all his life, and when at last his ambition seemed near its realization by the brilliant victory of Prestonpans, his mental balance was shaken, and henceforward all ideas of caution, of prudence, and of skilful adaptation of means to the achievement of the great enterprise in which he had

embarked were thrown to the winds. His mental condition during the march into England is thus graphically described: "As Colonel MacIvor's regiment marched in the van of the clans, he and Waverley were perpetually at its head. They marked the progress of the army, however, with very different eyes. Fergus, all air and fire, and confident against the world in arms, measured nothing but that every step was a yard nearer London. He neither asked nor expected nor desired any aid except that of the clans to place the Stuarts once more on the throne." Waverley, on the other hand, observed "that in the towns in which they proclaimed James the Third, no man cried God bless him." The mob stared, the wealthier Tories fled or feigned illness, the ignorant gazed at the clans with horror and aversion, and the prudent showed every token of their expectation that the rash enterprise would have a calamitous termination.

The unreasoning irritability of temper and the suspicious disposition which characterizes this stage is also well exemplified in the quarrel which Fergus had forced upon Waverley, at this time, ending in the dramatic scene in which the chief, by a blow on the head with the discharged pistol, laid the treacherous Callum Bey insensible at his feet. And when the collapse of the enterprise came, as it did virtually when the retreat northwards was determined upon at Derby, the transition to the *stage of melancholia* is so powerfully depicted that I cannot forbear to quote it: "None," says Scott, "were so sanguine as Fergus MacIvor; none, consequently, was so cruelly mortified at the change of measures. He argued, or rather remonstrated, with the utmost vehemence at the Council of War; and, when his opinion was rejected, shed tears of grief and indignation. From that moment his whole manner was so much altered that he could scarcely have been recognized for the same soaring and ardent spirit, for whom the whole earth seemed too narrow but a week before." And when a few days later he sought an interview of reconciliation with Waverley, he announced to him that he himself must be dead or captive before the morrow inasmuch as he had seen the *Bodach Glas*, a family spectre which always appeared to the Vich Ian Vohr of the day on the eve of death or some impending disaster. He thus describes his encounter with the *Bodach Glas*: "Since this unhappy retreat commenced I have scarce ever been able to sleep for thinking of my clan, and of this poor Prince, whom they are leading back like a dog in a string, whether he will or no, and of the downfall of my family. Last night I felt so feverish that

I left my quarters, and walked out, in hopes the keen frosty air would brace my nerves . . . I crossed a small foot-bridge, and kept walking backwards and forwards, when I observed with surprise, by the clear moonlight, a tall figure in a grey plaid . . . which, move at what pace I would, kept regularly about four yards before me. I was astonished at the man's audacity in daring to dog me. I called to him, but received no answer. I felt an anxious throbbing at my heart ; and to ascertain what I dreaded, I stood still, and turned myself on the same spot successively to the four points of the compass. By Heaven, Edward, turn where I would, the figure was instantly before my eyes, at precisely the same distance ! I was then convinced it was the *Bodach Glas*. My hair bristled and my knees shook. I manned myself, however, and determined to return to my quarters. My ghastly visitant glided before me (for I cannot say he walked), until he reached the foot-bridge ; there he stopped and turned round. I must either wade the river, or pass him as close as I am to you. I made the sign of the Cross, drew my sword, and uttered, ' In the name of God, Evil Spirit, give place.' ' Vich Ian Vohr,' it said, in a voice that made my very blood curdle, ' Beware of to-morrow.' " The spectre then vanished.

It may be said that the character of Fergus being fictitious, no useful purpose is served by analyzing it, but if it is true to nature, as it undoubtedly is, it is no more fictitious than is the most accurate record to be found in a hospital report. The stage of melancholia to which he had attained was characterized by gloom, sleeplessness, mental agitation, restlessness, vivid but corrigible hallucinations in full light, and loss of elasticity of step, with other indications of a minor degree of motor paralysis ; and instead of being exceptional, it is, in its minor degrees at least, one of the commonest functional nervous affections for which our advice is sought. This is the period of self-questioning, of soliloquy, of remorse, often also of repentance, and of the formation of new habits founded upon principles of duty ; and perhaps there is no more interesting period in a man's history, or one in which wise advice is of greater use, than during one of these times of depression, whether the mental condition represent the more or less normal reaction which always follows disappointment and disaster, or the abnormal reaction which succeeds to a time of excessive excitement and exaltation engendered by circumstances in a brain inherently unstable, or rendered unstable by the abuse of alcohol or other poison.

The transition from the stage of exaltation to that of melancholia is not always brought about, as it was in the case of Fergus, by the sudden collapse of cherished hopes. In some cases the stage of exaltation culminates in an outburst of extravagant conduct, which may display itself in reckless speculations, or in the purchase of objects which are altogether beyond the means of the patient and of no value to him when obtained. Some of these patients have to be placed at once under legal restraint, while others are brought to their senses by financial difficulties and social ostracism as effectually as if they were placed within the locked doors of an asylum.

A few words now regarding the sleeplessness of melancholia. Those who take alcoholic stimulants in what is usually considered to be moderate quantities have frequently a morbid dread of not sleeping on going to bed, long before they manifest any other sign of mental derangement, and if the physician protest against two glasses of whisky being taken at bed time, the reply often is "I cannot sleep without it." The dread of lying awake arises from the fact that already the disagreeable incidents of life, with their associated painful ideas and gloomy thoughts, are apt to obtrude themselves, and the patient is led to invoke his favourite beverages in the words of Banquo:—

" Merciful powers,
Restrain in me the cursèd thoughts that nature
Gives way to in repose."

And when the stage of melancholia is reached, the mind is apt to be excited at night by thoughts which chase one another in serial order with lightning speed, or to be agitated by a tumultuous tempest of conflicting thoughts and passions, which altogether prevent sleep. This is the stage at which our advice is most usually sought, and the mental condition must be treated by abstinence, rest, moral constraint, and the prudent use of anodyne drugs, otherwise the patient is sure to find transitory relief by drenching his brain by the free use of his ordinary beverage, and if he adopts this last alternative he has already begun to roll down the steep slope which leads to Tartarus. When once these patients begin to drown their sorrows in their cups, some readily develop acute delirium; others, after suffering for some time from great mental gloom, develop an attack of excitement or of mania, and have to be placed under restraint; while a third group manifest certain mental characteristics which incapacitates them for business, and renders them unfitted for attending to their social duties. The patients

belonging to the last group become shy and retiring in disposition ; they cease to mingle in society, and attention to the ordinary details of business is a source of great worry to them, while many are unable to hold a business interview with a well-known customer without being previously fortified by a glass of brandy. One of this class, who had gradually fallen into habits of intemperance, told me that for three years he had been greatly depressed, and during that time he had become very shy and timid. "I cannot," he said, "sign my name whilst under observation." "I live in the country," he continued, "near three or four neighbours, with whom I am on friendly terms ; but if I see one of them before me in the lane leading to the station I hang back so as to avoid speaking with him. I cannot endure to speak with strangers, and have a great aversion to see even one of my most intimate friends." He never had visual hallucinations, but was very susceptible to noises, and he has many times heard the sound of what seemed to be a foot-fall behind him, but on turning round he found no one present. He gave way to uncontrollable outbursts of temper at home, but he has not had homicidal or suicidal temptations. This timidity of disposition is well seen in females who give way to secret drinking. One of the earliest symptoms of mental disorder is that they cease to attend to their social duties ; they refrain from visiting, and friends, on calling, generally find them indisposed. As the disorder increases they become suspicious and distrustful of their nearest friends, and often accuse their neighbours of circulating scandal about them, or of overt acts of insult. It is in this class of patients also that the moral degradation, produced by chronic alcoholism, is best seen, for they are often mischief-makers, and their first impulse is always to tell a lie, even when no purpose whatever is served by it.

Patients in this stage suffer from dizziness, a feeling of insecurity in walking, and a peculiar derangement in their perception of the space relations of surrounding objects, which may be regarded as a hallucination of the muscular sense. One patient of this class, in walking to my consulting rooms, sought all the narrowest streets he could find, and he told me he did not think that, to save his life, he could cross over the open squares of the town. The hallucinations of the muscular sense are well marked in morphia poisoning, and have been described with unrivalled graphic power in the pages of De Quincy. "The sense of space," he says, "and in the end the sense of time, were both powerfully affected. Buildings, land-

scapes, etc., were exhibited in proportions so vast as the bodily eye is not fitted to receive. Space swelled, and was amplified to an extent of unutterable infinity. This, however, did not disturb me so much as the vast expansion of time; I sometimes seemed to have lived for 70 or 100 years in one night; nay, sometimes had feelings representative of a millennium passed in that time, or, however, of a duration far beyond the limits of human experience."

In the stage of melancholia the patient is often racked with remorse for the past, and at times some foolish act, which at most was only an absurdity to be laughed at, assumes in his half-accusing mind the proportions of a great crime. At other times, or at the same time, he is horrified at finding that his mind is filled with thoughts which prompt him to commit evil actions. These thoughts sometimes take an erotic turn, while at other times they assume the form of homicidal or suicidal impulses.

I do not propose to dwell upon the *third or maniacal* stage, because the mental disorders there met with are much better known to you than they can possibly be to me. An additional reason for passing over this stage is that its symptoms are accurately described in Dr. Bevan Lewis' excellent and elaborate work. The visual hallucinations are now vivid and quite incorrigible; to the patient they assume the form of burglars who have broken into the house, of detectives who have come to take him to prison, of men in collusion with his wife, and of animals of various sorts; and although the patient, on pursuing these images, finds that they escape in a way wholly impossible to solid bodies, yet he never doubts that they are realities. A patient under me a short time ago in the infirmary, who was exposed to the fumes of naphtha in an indiarubber factory, and who also partook pretty freely of alcohol, told me that he counted sixty rats in a row running over his bed; he also saw real men in his sleeping apartment and thought they were familiar with his wife, and, in consequence, he made a determined effort to strangle her. The fact that exposure to the fumes of naphtha may of itself cause mental disorder, was proved by the condition of a patient in the next bed to this man, who worked in the same factory, and who, although a total abstainer from alcohol, had yet suffered from great depression of spirits and well-marked pictorial hallucinations. Similar symptoms are also met with in poisoning by lead. A girl, under me in the infirmary a short time ago who had worked in a red lead factory, and who manifested

a well-marked blue line of the gums, double wrist drop, double ankle drop, double optic neuritis, and other signs of aggravated lead poisoning, had experienced pictorial hallucinations, and whilst in the infirmary had an attack of mania, during which she became so unmanageable that she had to be sent to the workhouse hospital.

The aural hallucinations now assume the form of distinct voices uttering blasphemous oaths and curses, or they are the voices of evil-disposed persons intriguing against the patient, or they become commands from heaven or threats from the spirits of darkness. The delusions connected with the lightning-like pains and other sensory disorders from which the patient suffers, are endless. One patient imagined that a foe had lurked in the cellar and then devised an electrical machine, by which he tortured him; while the delusion of having the skin covered with vermin, fostered, doubtless, by the feelings of formication, which accompany the neuritis, and those of having the food poisoned and of having a dead body near, fostered by derangements of taste and smell, are well-known and need not be further dwelt upon here.

The last phase of alcoholic insanity is of real interest, because it possesses very distinctive features. I say alcoholic paralysis, because it is most usually met with in chronic drunkards, but I have seen a more or less similar condition in chronic poisoning by lead, and it is possible that it might result from many of the other poisons mentioned, were the patient continuously exposed to their action. This condition may be called *alcoholic dementia*. The patient may pass into this form of dementia after an attack of mania, after an epileptic seizure, or, as in the case of women, somewhat suddenly and silently, without being preceded by any manifest symptom of mental derangement. The patient seems to talk rationally and calmly, but his mind is a complete blank with regard to dates and events. An infirmary patient of my own, who lay helpless in bed for nine weeks, narrated day by day to us how he had been out walking on the same morning. To the usual question of, "Where have you been to-day?" he would reply, "Oh! I have been out to the Pier. It was blowing quite fresh, but it has done me good." "Have you had anything to drink?" "Oh! yes; I met a friend. I forget his name, but I know him quite well, and we went to a public-house and had three-pennyworth of whisky each." On another day he described himself as having been walking in Whalley, of which district I believe he was a native, and he never failed

to praise the beauty of the country, or to meet a friend with whom he had the inevitable three-pennyworth of whisky. This man was also accustomed to tell us for many weeks that he had a baby in bed with him, and at first he was not a bit abashed when it was pointed out to him that there was no baby in bed, but as his mental condition improved a little he met us with the statement, "Oh! its mother has taken it." Another patient recently under me in the infirmary was a hawker of green vegetables about Fallowfield and Didsbury, and to the question of "Have you been out to-day?" he replied, "Oh! yes; I had a walk out yonder." "Did you meet anyone you knew?" "Yes; I met a friend, and him and me went into the public-house up yonder—I forget the name—and had a glass of beer." "Was it the Blue Bell?"—a wrong name being purposely suggested. "Yes," he replied dubiously; then proceeding more airily: "It is the public-house at the corner up yonder. You know it quite well. We had a glass of beer there." "And had you any more than one glass?" "Well, yes; we then came down to that other public-house, and had another glass there." A somewhat similar conversation took place day-by-day at the morning visit, and all this from a man who had been in bed for the greater part of the day for a month and had not been outside the ward during the whole of that time.

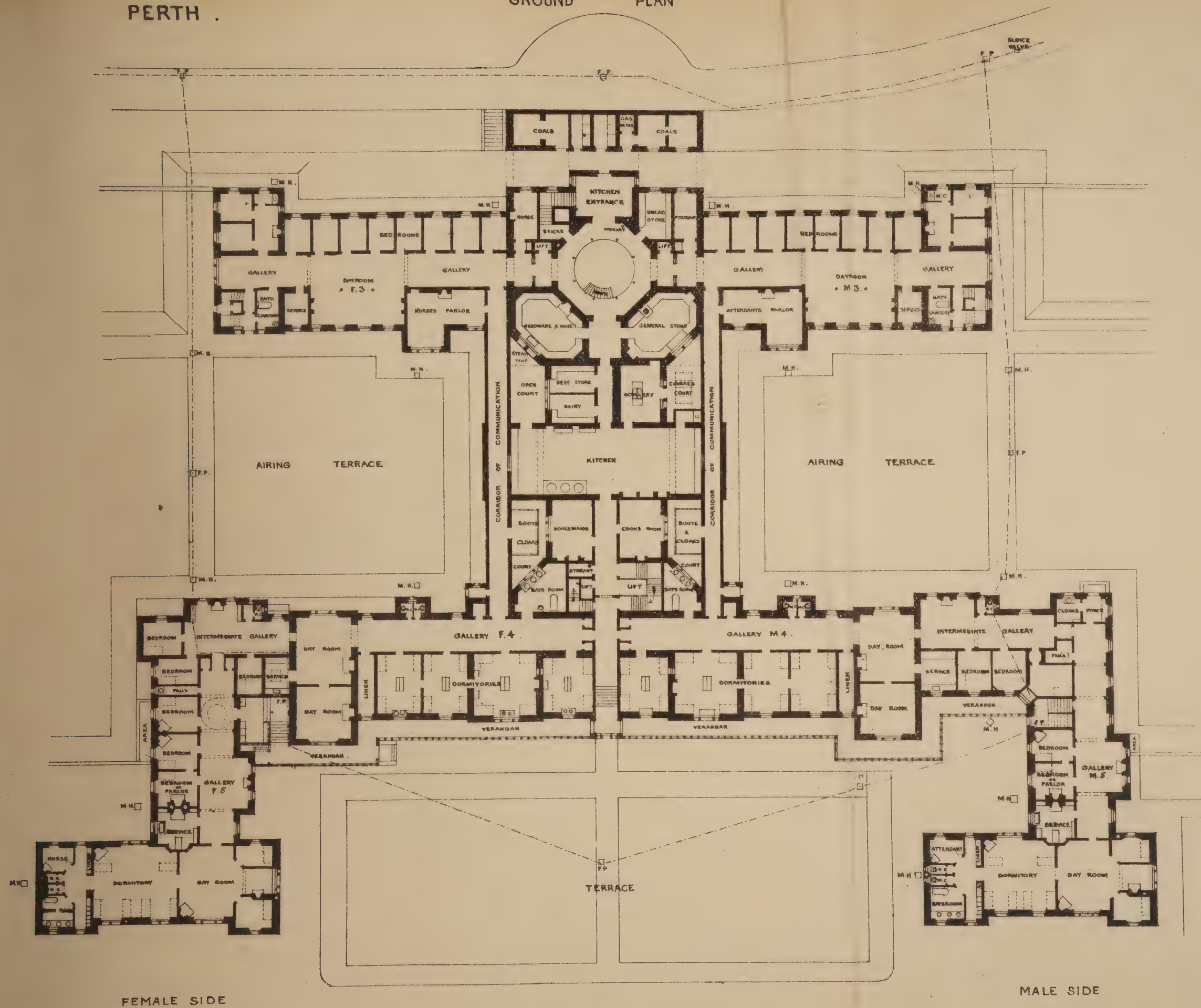
Gentlemen, I will not trespass further upon your patience. Before concluding, however, I would desire to tender to you my warm thanks for the patience with which you have listened to the imperfect and desultory remarks I have addressed to you on a subject, my knowledge of which, I am fully sensible, must be greatly inferior to that which is already the possession and rightful heritage of every member of your learned Society.

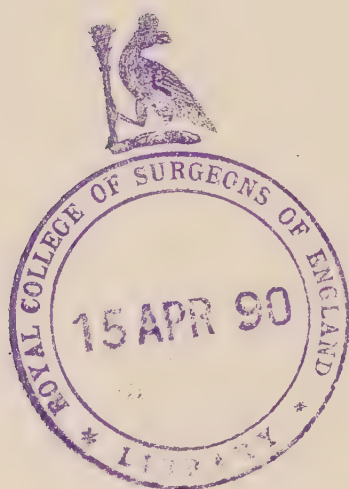
Description of the New Hospital Wings at James Murray's Royal Asylum, Perth. By A. R. URQUHART, M.D., Physician Superintendent; and A. HEITON, F.R.I.B.A., Architect.

It is now sixty-two years since James Murray's Royal Asylum was opened for the reception of patients; and, in the course of its history, many changes have been made in the architectural arrangements. The original directors were actuated by motives of the purest philanthropy, and laid

PERTH .

GROUND PLAN





down, in their first annual report, principles of action from which their successors have never deviated. These principles of action, however, were not and could not be carried out in practice in those days, when modern ideas were but nascent; and the most eminent Scottish architect of his day, guided by the most mature medical experience of the times, could not design such buildings as are now held as requisite for the treatment of mental diseases. The alterations and improvements found to be necessary, in order to maintain this institution in the front rank, were inaugurated some five-and-twenty years ago by the conversion of the dark and winding central staircase into a cheerful galleried hall. The light and air thus admitted, and the feeling of freedom thus installed, proved the keynote to the successive changes that have been wrought from year to year since that time. Hardly any part of the establishment has escaped the modernizing and re-arranging deemed necessary for effective care and treatment. The year 1887, however, found existing wards well-adapted for the chronic and quiet classes, but unsuitable for acute and infirm cases. It was, therefore, decided to add such accommodation as was found necessary, and this paper is intended to describe the leading features of the buildings designed for that purpose.

The asylum is arranged in two blocks connected by a central administrative building. In the south block there are six wards, three male and three female. These form three floors. The lowest was formerly used for excited patients; but the day-rooms were required for stores, and it was found to be best adapted for sleeping accommodation only. Above this, on the level of the principal floor, are the wards for chronic patients, over which are the wards for convalescents and those of orderly habits. Reference to the plan will show how these galleries have been altered from the archaic type of central corridor with rooms on either side.

The north block on the principal and upper floors is arranged in suites of private rooms. On the ground floor are galleries M. 4 and F. 4, occupied by excited patients. These were built for epileptics and idiots, and for many years were used for sick and infirm cases. It was with the view of improving the accommodation for these patients, of providing comforts and conveniences unthought of when this asylum was planned, that the Directors decided to build. It was not so much to gain additional beds; although, by the erection

of the new wings, the number of patients resident in the main asylum may be increased from 95 to 126, and ample accommodation is found for attendants, nurses, domestic servants, housekeeper's and other stores, as well as space for a complete series of medical baths.

The first question to be decided was whether these hospitals should be detached from the main building. Inasmuch as the asylum is of small size, with a proportionately small staff, it was thought advisable to concentrate the whole as much as possible. It has been a ruling idea here, first inculcated by the late Dr. Lauder Lindsay, that any enlargement should be by means of succursal villas rather than by additions to the central asylum. The difficulties of the site, occupying as it does an elevated slope commanding extensive views, had also to be considered; and special care in design was necessary in order to preserve existing amenity. It was, therefore, evident that it must be a low building conformable to the exigencies of the original institution. In consequence of this, it became necessary to follow the classical style of the first plan, only departing from it in such details as were architecturally permissible: for instance, by substituting for the bluish-black local whinstone, white sandstone, coursers with red sandstone facings, by enlarging the window spaces, and by introducing pediments over the principal windows and similar expedients. Thus a prevailing effect of harmony, warmth, and domestic comfort has been attained.

On reference to the accompanying plan it will be seen that these buildings extend east and west from the north block of the old asylum, beginning from the dayrooms for excited patients (M. 4 and F. 4). Taking the male side first, it will be observed that the fire-proof termination of M. 4 is separated from the hospital (M. 5) by an INTERMEDIATE CORRIDOR designed for the treatment of acute excited cases. The architect here has so disposed of the doors and windows as to minimize any noise and disturbance to other patients as far as possible. A specially valuable feature of this arrangement is that, from M. 4 on the one hand, and M. 5 on the other, it is possible to immediately concentrate upon a resisting patient an ample force of attendants. The bay window may be curtained off from the corridor and used as a sitting-room. This intermediate gallery is provided with a fire-place and water-closet, and is also conveniently placed for exercise either in the well-

lighted corridor or adjacent airing terrace, which is on the same level.

On entering the GALLERY M. 5, from the intermediate corridor, we find, to the south, a small lavatory and cloak-room, and an entrance porch laid with Mosaic tiles. To the north runs the main corridor, the length of which is broken up by pilasters and arches. It gives off single rooms to the east and a large windowed bay to the west. This bay contains a fire-place, and is peculiarly suitable for infirm patients, as it induces them, while enjoying the warmth of the fire, to come within the influence of the sunlight. The single rooms are fitted with fire-places, and special care has been bestowed upon the position of the bedsteads in order that they may be out of possible draughts, and under instant observation from the doorway. Two of these rooms communicate, and may be used as two bedrooms, or as a parlour and bedroom, as may be desired. When a patient is *in extremis*, we usually have the friends resident here, and it is found useful in practice to devote the outer room to the friends and the inner to the patient. The privacy thus obtained is a matter of no small moment.

The DAYROOM is entered directly from the corridor, and to the east of it the dormitory is attached, with the lavatories, &c., beyond. This plan affords facilities for constant supervision of the patients, as the principal doors are panelled with plate-glass, and the attendant moving about the day-room is able to observe at a glance the entire length of the corridor to the entrance at the one end and the dormitory and water-closets at the other.

The SERVICE ROOM is also under observation from the day-room and dormitory, and *vice versâ*. The idea was taken from the old English bar parlours. By projecting a bow window filled with leaded cathedral glass into the principal rooms, the attendants can serve the meals expeditiously and with neatness; and, while engaged in household duties there, they have immediate knowledge of what is going on amongst the patients. This room is lined with pitch pine, with fittings of Californian red wood, and communicates by telephone with the centre of the asylum. In the bow window a steel cistern table is placed, which is filled with hot water from the ordinary supply before meals. The plates are thus heated and the food kept warm while being carved. A teak sink is supported on iron brackets on the outer wall, so that

accumulations of dirt are impossible. The medicine cupboards, knife boxes, &c., are designed to fit the recesses formed in the walls. By means of spring bolts the doors open and shut with a single turn of the key, even when the doors are double, and the escutcheon plates of the keyholes are countersunk. These minor details are of importance in securing a quick and accurate service.

The CUBICLES shown as opening off the dayroom have been found most convenient for patients requiring constant care and nursing. They give value to the larger room by permitting its arrangement of irregular shape. The great west window forms a bay out of the current of the general life in the rest of the room, and gets away from the usual institutional type of apartment.

The DORMITORY, being provided with cross ventilation and having ample floor space, is always fresh and airy. It will be remarked that the disposition of the fire-place here, as elsewhere, is peculiar. By placing it in the corner the floor space is not so much broken into, and there is more room for beds and furniture.

The WATER-CLOSETS and LAVATORIES and the attendant's room are disconnected from the dormitory by a cross passage of ample size. In it are placed the linen cupboards, steps for access to cisterns, and fire escape. These cupboards are carried up to the ceiling to prevent the accumulation of dust and make the most of the space at disposal.

The bath is fitted with indiarubber-tired wheels, so that it may be moved easily to the bedside of any patient. The pipes are of ample size, and the tap is so made as to deliver the water at any required temperature. It is impossible to turn on the hot water without first turning on the cold, or to turn off the cold water without first turning off the hot. The lavatory basins are so put in that they may be removed singly from underneath without disturbing the fittings. By the use of combined stop-cocks and cleansers, risks from frost are prevented and the discharged water flows to the outside by an open conductor.

The water-closets are fitted with white enamelled iron of the usual flush out pattern where rough usage is expected. Otherwise they are of stone-ware, and of the same description. The ventilation is separate for each closet, as hereafter to be explained.

The whole of the BASEMENT, which is on a level with the ground outside, was covered with Briggs' asphalte as a pre-

ventative against damp and vermin. On this half battens and flooring were laid without fear of deterioration. Underneath the principal rooms of Gallery M. 5 are the baths, the ceiling of which is formed of fireproof concrete of unusual thickness. The shampooing-room and hot-room adjacent are under the dayroom, while the dressing-room and swimming bath are under the dormitory. These are at present used as a temporary chapel. The rest of this floor is divided into rooms for the night attendants, a dormitory for wet and dirty patients (who may easily be reached by the service staircase indicated on the plan), and the head attendants' stores.

It will be observed that a direct communication from the administrative centre of the asylum is formed by a glazed VERANDAH, which obviates the necessity of passing through the gallery for excited patients in order to reach the hospital ward, and enables the staff to complete a round of the institution without retracing their steps. This is also an advantage to visitors waiting on sick and recent cases. It is proposed to fit up part of the verandah as a bowling alley.

Similar arrangements have been adopted on the FEMALE SIDE. It will be noticed that the dayroom and corridor of F. 5 are placed to take advantage of the western exposure in so far as possible. Underneath this gallery is the accommodation for domestic servants, night nurses, matron's stores, and the dormitory for wet and dirty patients.

The HEATING of these new wings is an extension of the system previously adopted. It has not been the subject of objectionable remark, nor has it been followed by costly or disastrous consequences. Steam is delivered from the boilers at a pressure of 20lbs., which is reduced in transit to 5lbs. on the square inch. Some years ago the boiler power was increased and a tunnel was formed between the boiler house and the kitchen. In this tunnel are conveyed the steam, water and gas pipes, which are therefore accessible at all times. To secure an even distribution of the heat the steam pipe (mostly 2in. diameter, cast-iron with rust joints) runs round the whole block behind the skirting of the outer walls. These tracks were designed in the following manner:—A continuous recess at the level of the floor was left by the masons when building. The roof of this recess was formed of an extra strong bond-timber 1½in. thick. The flooring boards go hard up to the masonry, and the recess between the lower front edge of the bond-timber and the upper edge of the

flooring was rendered with a concave coating of cement. The pipe having been adjusted and tested, an open work cast-iron skirting, surmounted by a moulding of the same design as the skirting elsewhere, was screwed to the face of the bond-timber and dowelled into the floor. Thus the pipes are easily got at when desired, and are neither unsightly nor accessible to the patients. The large window space necessarily permits much loss of heat; and, as these corridors may be likened to a greenhouse, it was thought that a similar plan of equable distribution of the heat along the outer chilled walls would best be obtained by a continuous pipe. All these heating and cooking pipes return by the tunnel to the boiler house and are fitted with Royle's Syphonia Traps. These permit the air and water to escape and obviate the sounds of knocking and the disasters of bursting that have been complained of by the opponents of steam heating. An economy of fuel and water is also effected by Royle's return Steam Trap, which lifts the condensed water from the open drip pipes into the boiler.

The VENTILATION is also designed on an original plan, and has been as successful as any natural (non-forced) system can be. Each room and each section of corridor have their own distinct and independent supply of fresh air and their own distinct and independent exhaust. This has been attained in the following manner:—First, *Inlet*—Between two flooring joists, in a suitable position, a channel was formed of polished cement. One end of this channel communicates with the open air by a valved grating. The other end is brought up to deliver the fresh air through a similar grating in the skirting. The valves in the inside gratings are all adjustable and removable so that the channels may be cleansed thoroughly by water if necessary. Second, *Exhaust*—From the centre of the ceiling of each room or section of corridor, where an adjustable valved grating is placed, a 12in. square zinc tube was led to the ridge of the roof to terminate in an exhaust fixed ventilator. The action of this ventilator is assisted by the gas pendant from the ornamental grating in the ceiling; and, in the case of the principal rooms (over which the hot-water cisterns are placed), the exhaust tubes are led through the cistern chamber with the view of rarefying the contents of the tubes. It has been found in practice that this works very well except on still, cold, foggy nights, when the exhaust valves must be closed to prevent a downpour of raw air into the rooms or

corridors not lighted by gas, or not having exhausts passing through the cistern chamber. There is an extra ventilator over the door of each room which can be opened if the outer air be too cold for direct admission. By this means warmed fresh air is drawn from the corridors. Dr. Findlay, late assistant medical officer here, favours us with the results of his investigations into the heating and ventilation, and his observations are appended, together with a sheet of drawings showing these arrangements in detail.

The construction of the WINDOWS must also be described in connection with the ventilation. In order to obtain the full benefit of the sunshine, the proportionate window space was increased to what was believed to be the utmost limit of propriety. It now appears that the proportion of window to wall space in corridors is 1 to 13, and in the principal rooms 1 to 10. The sashes are designed with a deep bottom rail, and the soffit splayed upwards and inwards, so that a current of air can be introduced at the sash check, having a proper direction towards the ceiling. As each window in the corridors and dayrooms is fitted with a cushioned seat, this arrangement is specially valuable. In the principal rooms, where the windows have been carried up in pediments to the full height of the ceilings, the upper sashlight is of small tinted panes hinged on the under rail to open inwards. This is moved by a gearing motion behind the architrave, and can only be put in action by the use of the attendant's key. These high fanlights, therefore, remain fixed at a suitable inclination in the windiest weather, irrespective of the interference of patients. The design of the window sashes is varied in the intermediate corridor, the hospital corridor, and the principal rooms. In the first the panes are comparatively small, the sash being divided by two vertical and four horizontal astragals, giving fifteen panes each, $12 \times 12\frac{1}{2}$ inches. In the second there are one vertical and two horizontal astragals, giving six panes of strong plate glass, each $18\frac{1}{2} \times 22$ inches. In the third, under the tinted fanlights, there are one large horizontal pane and two large vertical panes of strong plate glass. These last measure 23×40 inches.

The SHUTTERS generally slide up in one piece from boxes underneath the window-sills. This is the best system where it can be applied, as any desired amount of air and light can be admitted irrespective of the interference of patients. Where the fireproof flooring interfered with this design the

sides of the window recesses were sufficiently splayed to allow of half the shutter folding back on each side, where it can be secured by a simple French casement lock.

The DOORS are designed with ornamental pediments, in the frieze of which is the valved ventilator previously referred to. The hinges are constructed to come in with the mouldings of the architrave, which offers no sharp corners or obstacle to the door opening fully back to the wall. The lockplate is of polished ornamented brass and the inside handles are finished flush, where suicidal patients may be sleeping. In order to combine strength with the advantages of thin inner walls, the door posts were carried up from the floor sleepers to the ceiling joists before the brickwork was built.

No asylum FLOOR can be considered satisfactory unless it is thoroughly sound and water-tight. With this in view, the pitch-pine used for that purpose was purchased and dried at the asylum so soon as the contracts were settled. It was laid down with red-lead between each board and thoroughly cramped together under stringent supervision.

The WALL SPACES have been treated as variously as possible. In the intermediate corridors the lower part of the walls, to a height of six feet, are lined with moulded pitch-pine. The hospital corridors are fitted with a chair-belting and a picture moulding connecting the door caps forming a dado and frieze respectively. The wall space of the day-room between the chair-belting and the picture moulding is laid out in panels formed with Keene's cement mouldings and filled in with Japanese leather paper. The ceiling is coved and panelled in ornamental squares. This treatment lends itself to rich decorative effects without extravagant cost. The dado of the dormitory is lined with ornamental glazed tiles, and is otherwise plainly finished. The lavatory and water-closets, together with the adjacent passage, are also lined with glazed tiles to a suitable height. In those rooms for cases of the gravest nature, the Keene's cement and joiner work is finished in quarter-circles, so that there may be no angles in which dirt or dust may accumulate. The facings of doorways and windows are rounded and finished flush with the cement, the joints being covered in by bands of half-round polished brass.

In addition to the Steam Heating, open FIREPLACES are placed in the rooms and corridors. These are fitted with slow combustion grates, such as were originally introduced

by Messrs. Barnards, Bishop, and Co. Rough-glazed tiled hearths are surrounded by Curb Fenders, under which the steam pipe is concealed as it passes round the building. The overmantels are of stained pine or mahogany, with mirrors and ornamental embossed tiles inserted as panels; or of panelled red sandstone jambs and lintels, sloped back in overlapped stonework.

The PAINTER'S WORK has been executed entirely by the asylum artisans. In endeavouring, by the use of divers stains and varying wall papers and stencils, to give a bright domestic impression, sanitary principles were not lost sight of. But in such an establishment as this a sparing use of shiny paints and varnishes is preferable. The conductors and rhones exposed to weather in trying situations were painted to correspond with the stone-work, and the red sandstone was broken to powder and dusted on the wet paint. This makes a very enduring coating.

The SANITARY arrangements were subjected to the scrutiny of the engineer of the Dundee Sanitary Association. It was laid down as an absolute rule that no pipe was to be covered up behind plaster, or placed in any inaccessible position. Fixed iron ladders were placed in suitable cupboards, to give access at all times to the cisterns where water is stored or heated, and where pipes are numerous. These cisterns are under the control of the attendants, the water being rapidly and economically heated by a silent steam injector. When sufficiently hot the valves are closed, so that a great quantity of hot water is locally available at all times of the day and night. As in other parts of the establishment, in order to economise the heat, non-conducting cement (composed of clay and jute waste) with slag wool is largely used to cover hot water pipes and cisterns. By thus placing it in the power of the attendants to create and retain a hot water supply, warm baths are ready at all hours of the day and night. The pipes, where visible, are coloured in accordance with their contents, whether steam, gas, hot or cold water.

The FIRE MAINS are provided with suitable hydrants on each staircase, the hose being kept lapped down (*not coiled*), ready for immediate use. A gauge registers the varying pressure on the main.

The extension of the DRAINAGE SYSTEM, which this new building entailed, has been carried out on lines formerly indicated. Where troublesome patients are likely to block

up a drain from the water-closet, the soil pipe is led into a white glazed brick chamber, in which is a wire-work cage. Insoluble contents are removed daily by one of the gardeners. At each junction and bend a man-hole has been formed, permitting easy inspection. Where the main drain opens upon the farm a branched disconnecting chamber is placed. This gives facility for sending the sewage in any required direction.

The time did not seem ripe for the introduction of electricity, and the system of ventilation adopted appeared to lend itself to the employment of Gas. The supply is led first of all to the service room, where a T piece gives off branches to all the burners used in the new wing. Thus the attendant has absolute control over the lighting, and may have a brilliant flame, or, by means of a bye-pass, a small flicker, as may be desired. In the principal rooms the Wenham lamps have been found to act best, but small Bower lamps are used in the single rooms for quiet patients. Where patients are apt to be destructive Dr. Needham's plan has been adopted. The open flame burns in the wall, protected by very heavy plate-glass, and provided with an extract flue. Ordinary burners have the tap so formed that it shuts itself automatically should it work loose.

The FURNISHINGS have been selected with a view to domestic comfort and artistic effects. The use of Fitments, as recommended by Colonel Edis, F.R.I.B.A., has been found convenient and appropriate. For instance, the recesses of the windows in the dormitories have been filled in with low cupboards of dark mahogany, and surmounted by ferneries and aquaria. Each bed is hung with French dimity curtains, giving a quasi-privacy to the occupant, and so on.

It is, of course, quite impossible to complete a work of this magnitude without regrets. The concrete stairs leading to the verandah are already dangerously slippery, and the want of an additional room in corridor M. 5 is sometimes felt. On the whole, however, the design may be safely recommended as compassing the wants of this asylum. It is a comfortable, healthy hospital for the patients, and it is worked with facility and pleasure by the staff.

In conclusion, it may be added that this extension set free apartments in the central block for stores, as shown on the plan. Suitable parlours for the attendants' and nurses' exclusive use have also been formed in the neighbourhood of

galleries M. 3 and F. 3. The old chapel has also been converted into a dining-room, with service-room and still-room attached, so that the value of these alterations must be taken into account in estimating the total cost. Exclusive of such undertakings, the money paid to the contractors amounted to £6,313. The accounts for furnishings, painting, etc., are not yet completed.

It still remains to add a larger recreation-room and a chapel to the main asylum. When that is done it may be considered as fully equipped for its work, and efficient as a central hospital for the treatment of the acute, infirm, and troublesome classes of the insane, while milder cases are relegated to such separate homes as Kincarrathie.

Observations on the Ventilation and Heating. By Dr. FINDLAY.

M. 5 DAYROOM (new building) contains about 5,636 cub. ft., after making deductions for furniture, etc. The floor area is 484 sq. ft., and the window area 144 sq. ft. The average heat in the month of November was fairly constant at 60° to 62° Fah. The inlet for fresh air is protected by a grating, 14in. × 7in., and the exhaust shaft measures 12in. × 12in. The smoke test showed a good current of air when the windows and doors were closed.

M. 5 DORMITORY has a cubic capacity of 6,000 ft., after deductions for furniture, etc. It contains five beds, giving 1,200 cub. ft. per bed, with a floor space for each of 100 sq. ft. The window area is 144 sq. ft. The temperature was maintained at 60° during the night, when the minimum temperature of the outer air was 41° Fah. In this room the inlet shaft opens by a grating, 14in. × 14in., in the middle of the floor, otherwise the ventilating arrangements are the same as in the dayroom. The chemical examination of the air showed that the carbonic acid measured ·586 per thousand cubic feet at 11 p.m. (temp. 62°), and ·617 per thousand at 5.30 a.m. (temp. 62°). Relative humidity 66 (saturation being 100). The smoke test showed that the ventilating apparatus was working efficiently.

SINGLE ROOMS.—The north cubicle contains, after the usual deductions, 850 cub. ft., with a floor area of 82·5 sq. ft. The south cubicle similarly contains 950 cub. ft., with a floor space of 100 sq. ft. These showed similar results to

those obtained in the larger rooms. Single rooms opening off gallery M. 5 measure as follows:—

	Cub. ft.		Sq. ft.
Parlour	1,509	... floor space ...	133
White room	1,410	... floor space ...	130

Those opening off the intermediate corridor —

Strong room	1,555	... floor space ...	136
—	1,530	... floor space ...	137

Window area in all these single rooms... .. 19

M. 4 DORMITORY (old building), ventilated by disused hot air flue and revolving Archemedian ventilator, contains four beds. After the usual deductions there is a cubic capacity of 3,068 ft.—that is, 767 cub. ft. per patient, with a floor space of 66·5 sq. ft. The window area is 19 sq. ft. In this room the amount of carbonic acid in the air at 11 p.m. was ·703 per thousand cubic feet (temp. 57°), and at 5.30 a.m. it stood at ·903 per thousand (temp. 61°). At the same time the average quantity of carbonic acid in the external air was found to be ·393 per thousand cubic feet.

In the new wing sterilized glass plates, on which had been poured a film of Koch's sterilized peptone beef jelly, were exposed on many different occasions on the floor of M. 5 dormitory and day-room for two hours, from 5.30 to 7.30 p.m. The plates were then placed in a moist chamber, and incubated for 5 to 6 days, when they were examined. On the male side it was found that about ten colonies of micro-organisms on the average had formed on every square inch of jelly thus exposed. Of these there was an average of one mould on each square inch, generally *Pencillium glaucum*; in two cases it was *Aspergillus nigrescens*; about four colonies per square inch of pink *Torula*, and the same of *Bacterium termo*. A few colonies of *Bacillus subtilis* were found. The rest were Micrococci, such as are generally found in pus when examined under the microscope. On the observations made on the female side the average number of colonies per square inch was six. The various kinds were similar to those found on the male side, except that there was a marked absence of colonies of pink *Torula*. This may be explained by the presence of a paralytic case suffering from bed-sore on the male side.

Table showing Accommodation for Patients and Attendants.

Classification.	Gallery.	Male Patients.				Attendants.	Gallery.	Female Patients.				Attendants.
		Single rooms.	Private rooms.	Dormitories.	Total.			Single rooms.	Private rooms.	Dormitories.	Total.	
Convalescents and presentable	1	8	1	0	9	2	1	9	1	0	10	2
Chronic and less presentable	2	9	1	3	13	2	2	9	1	3	13	2
Sleeping gallery ...	3	12	0	0	12	1	3	12	0	0	12	1
Excited	4	2	0	14	12	4	4	0	0	12	12	4
Intermediate gallery...	Int.	3	0	0	3	0	Int.	3	0	0	3	0
Sick and feeble... ..	5	4	?	5	9	1	5	5	?	5	10	1
Dirty, and attendants and servants	6	0	0	4	4	2	6	0	0	4	4	10
Total ... ..	...	36	2	26	62	12	...	38	2	24	64	20

	Patients.		Attendants, etc.	
Single rooms	74		10	
Private rooms	4		4	
Gallery dormitories	24		20	
Total	126		34	
North and south private rooms	4		3	

Table showing Results of Observations of Ventilation and Heating, by Dr. Findlay.

Name of room and locality.		Cubic capacity after deductions.	Floor area in square feet.	Cubic capacity per person.	Floor area per person.	Average Results.				
						Time of observation.	Carbonic acid per thousand.	Temperature of room.	Temperature of outer air.	Carbonic acid in outer air.
New Building.	M. 5 dayroom ...	5,636	484	469	43	{ 11 p.m. 5.30a.m.	{ .586 .617	{ 62 deg. 62 deg.	{ 41 dg.	{ .393
	M. 5 dormitory } with five beds }	6,000	500	1,200	100					
	M. 5 N. cubicle	850	82							
	M. 5 S. cubicle	950	100							
	M. 5 single room	1,509	133							
	M. 5 single room	1,410	130							
Old Buildg.	Strong room Int.	1,555	136			{ 11 p.m. 5.30a.m.	{ .703 .903	{ 57 deg. 61 deg.	{ 41 dg.	{ .393
	M. 4 dormitory } with four beds }	3,068	265	767	66					
	M. 5 single rooms	810	80							
	M. 1 single rooms	850	80							

The Mouth in Backward Children (Imbecile) of the Mongolian Type. By ROBERT JONES, M.D., B.S.Lond., F.R.C.S.Eng. (Medical Superintendent, Earlswood Asylum).

So much has been said and written about the mouth—the palate and the teeth—that it may be difficult to say anything fresh, perhaps more difficult to reconcile statements already made. We hear from one authority that a highly arched palate and contracted jaws are a sure sign of weak-mindedness; so sure, that imbecility can be diagnosed as congenital or otherwise according to their presence. Another authority regards contracted, badly-developed jaws as an equally certain sign of a higher state of civilization—children of a “well-bred aspect” having the abnormality in about seventy per cent.; those of a “coarse, low, and brutal aspect” manifested the deformity in only seven to eight per cent., whereas those children of doubtful aspect occupied an intermediate position between the other two as regards the frequency of the deformity. The comparative disuse of the organs of mastication among civilized races who cook and soften their food before masticating is probably confirmed by a statement made that irregularities of the teeth and contracted jaws are rare among savage races. It has, at any rate, become very generally acknowledged that a highly-arched palate is a common deformity in imbeciles, and the importance of the teeth as organs of mastication, with their necessity for healthy digestion, has led to certain observations which I shall shortly relate. From an examination of a large number of mouths in imbecile children, I am very strongly convinced that vaulted arches are not so common as has been supposed, and that these high palates occur mostly in two classes of imbeciles, viz., the micro-cephalic and the Mongolian type. As it is much more common in the latter, I shall refer only to this class. It is well-known that there are among imbeciles as a genus several well-defined and distinct species; no species is more clearly defined and more distinct than this, described by one authority in his ethnological classification as the Mongol or Kalmuck type. This species, composed of individuals having a very close resemblance to one another, is not a very large one; the class constitutes about four or five per cent. of the total number of imbecile children. They are generally short in stature—adult males rarely measure over five feet; females rarely over fifty-five inches in height; they have a squat figure, and are either of a very light or dark com-

plexion; the head is small and round, the measurements from the root of the nose to the occipital protuberance and from ear to ear being nearly equal. The hair is never curly, it is straight, lank, and thin, or straight and coarse, sometimes absent, at other times devoid of pigment; the faces are round, length and breadth being nearly equal; the nose is usually flat over the bridge, and upturned and sharp as if bitten off; the eyebrows tend to run outwards and slightly upwards—the eyelids more so—the outer canthus and the opening between the eyelids having a very distinct outward and upward tendency—hence the Chinese, Tartar, or Mongolian features. The eyebrows may have a distinctly arched direction, but the outer canthus has an almost invariable upward direction. The space between the eyes appears wider than normal, owing to the flattened condition of the bridge of the nose. The face is rough, the skin being generally coarse and loose; the tongue is usually deeply transversely fissured; their hands and feet are broad and short, and their joints are very supple, their usual and favourite position at ease being that of squatting, tailor fashion, on their crossed legs, again like the Chinese. Their mental, no less than their physical, features are characteristic, the habits being lethargic, dull, and reserved in company; they are very observant, not easily roused to enthusiasm by others, although very playful and original when not watched; they are very apt mimics of muscular movements, fond of music and colour; they can be educated with advantage up to a certain point, and have a great desire, when it pleases them, to be useful to others. The smaller children of this type will turn over and over again the gaudy pages of a coloured picture book, in appreciation of varied tints. They are often near-sighted. Their articulation is defective; they can rarely pronounce the sibilants, but improve by training; they are usually short-lived, but rarely do any of this class suffer from epilepsy. They are generally the youngest in large families, or there is much disparity in the parents' ages. It is very desirable to know this type in order to give a satisfactory prognosis to anxious parents.

Now, with regard to the teeth and palate. As stated above, I am strongly of opinion that too much stress is laid upon a highly-arched palate as a concomitant deformity in the weak-minded child. I am far from saying that this congenital irregularity does not occur, but it occurs most frequently in the Mongolian, which type forms but a small percentage of imbeciles. Whether this irregularity be inherited or not, it is difficult to state; observation has proved that variations in the

position of the teeth, at first sight seeming accidental, are often transmitted from parent to child, so is also the congenital absence of certain teeth; still, in some cases, it is doubtless that the high vault, mal-position of the teeth, together with irregularity of the maxillæ, may be due to developmental causes. Considering that the relation between dermal coverings and the teeth is a close one, as has been pointed out by Darwin in his reference to certain mammals, which being most aberrant in their dermal coverings are also remarkable for the deficiency or redundancy in the number of their teeth, it is not surprising that we should find these organs and the palate peculiarly affected in Mongolian imbeciles, in whom a definite and peculiar condition of the skin and hair has been found to co-exist. It is doubtless needless to refer to the fact that both the skin and its appendages with the teeth are similarly developed from the same epiblastic layer of the blastoderm, and what affects the one during intra-uterine life is likely probably to affect the other under similar conditions. The variations met with in these cases may conveniently be referred to under three headings—the teeth, maxillæ, and palate.

(1.) *The Position of the Teeth.*—In no case was there marked prognathism—the front teeth of the upper jaw did not markedly project forward, neither was there a marked retreating backwards, but the lower incisors rarely met the upper in exactly a straight line; the most usual is for the lower jaw to be slightly more prominent than the upper; the molar teeth appear to be fairly normal, and the ramus is not unduly rectangular, perhaps the most frequent cause of projecting upper teeth. The lower incisors also appeared fairly uniform as regards enamel, although the enamel of the teeth in the lower jaw was much more frequently coated with tartar, due to the accumulation of saliva in the mouth, owing to the sluggish movements of mastication and deglutition in all children of feeble intellect, a peculiarity not by any means characteristic of the Mongolian type. The lower front teeth, as also the upper, are not very regular, and it is well-known that any abnormality in the position of the teeth has not the same chance of correction in the imbecile that it has in the healthy child—owing to the nerve force controlling the even and symmetrical pressure of the lips and tongue upon the teeth being impaired—the tendency to correction is, therefore, absent or diminished.

(2.) *The Maxillæ.*—The most frequent condition mentioned above, viz., the prominence of the lower line of incisors, may be referred either to a smaller alveolar ridge of the upper

maxilla—possibly hereditary—or to a departure of the lower jaw from its normal form. It is unusual to find in these cases any marked deviation either in size or shape of the lower jaw, although an abnormal development (as when the teeth do not meet, being separated by a gap) in some cases does exist. In these, owing to the obliquity of the ramus of the lower jaw, the molars alone meet, and that portion of the jaw in front is greatly increased compared to the portion bearing the molar teeth. In the upper jaw the contraction of the alveolus at the level of the bicuspid gives rise to the palatal deformity or irregularity, which is the most constant feature in these cases, and which, unfortunately, cannot be remedied; in one child the highest point of the vault measured over one and a quarter inches from the level of the crown of the teeth, and necessarily interfered considerably with voice-production.

(3.) *Palate*.—The V-shaped or wedge-shaped mouth is the most commonly met; in it the whole of the teeth of one or both jaws may be involved, and instead of the elliptical arrangement, the teeth occupy two converging lines which meet at an angle in the anterior part of the jaw, being frequently accompanied by a high and vaulted palate. The position of the teeth on the two sides is generally pretty symmetrical, and the deformity is usually confined to the upper jaw, there being an appearance of contraction at the line of the bicuspid teeth, giving the suggestion that the jaw had been pinched at this level and the palate directed upwards. As the contraction of the jaw is said not to be manifest until the eruption of the permanent teeth, and the molar teeth generally diverge from this point of contraction at the bicuspid line, it appears that unless the front portion of the jaw (which undergoes no material alteration in form after birth) has received during intra-uterine life its imprint for posterior divergence, the newly-added portion at the back of its alveolar border will form an angle with it, and this angle, corresponding with the contraction of the V-shaped-palate, becomes the deformity (either accidental or hereditary) which is at present impossible to remedy. Other causes of contracted jaws than those occurring during intra-uterine life, such as premature extraction of temporary teeth, etc., need not here be discussed.

In many of these children the enamel of the teeth is irregular, easily broken down, pitted, and grooved, and it would be interesting to find out the further relations between homologous structures developed from the epiblastic layer, such as the skin and appendages, the teeth, and the nervous system.

On the Treatment of Insanity by Hypnotism. By R. PERCY SMITH, M.D., M.R.C.P., Resident Physician, Bethlem Royal Hospital, and A. T. MYERS, M.D., M.R.C.P., Physician to the Belgrave Hospital for Children.

Hypnotism has been found by some of its students, especially on the Continent, to have so many possibilities in its connection with medicine, and so much undoubted influence in connection with the mind, that it has naturally fallen to its lot to be employed for trial, at any rate, in the therapeutics of some of the mental maladies. The dominance of one human being over another, which is, for the moment at least, gained by its influence, seems in some ways more appropriate to the guidance and help of the insane by the sane, than of the sane by their equals. But its possibilities and uses are not questions that can be determined by any *à priori* reasoning as to whether such guidance may be for the advantage of those who are led in certain circumstances of difficulty, such as insanity, but rather by the facts and results of its application.

Through the first three-quarters of the present century there were occasional small and charitable attempts to utilize this ill-understood influence for the benefit of those whose mental state was out of gear. Records of such attempts may be found in the works of Puységur, de Gros,* Charpignon,† the earlier work of Liébeault,‡ and elsewhere. But these were for the most part fruitless, and no general interest took this channel either at home or abroad. The weighty suggestions of Dr. Hack Tuke in 1865§ as to the possible usefulness of a hypnotic treatment of insanity, most unfortunately led to no practical results. During the last ten or twelve years hypnotism, almost all over Europe, has made such a rapid push to the front, both as a physiological and psychological study, and as a possible therapeutic agent, that it is little wonder that

* Who wrote under the pseudonym of Philips, "Cours théorique et pratique de Braidisme ou l'Hypnotisme nerveux." Paris, 1860.

† "Médecine anémique," p. 165.

‡ "Du sommeil et des états analogues," 1866, p. 338, relating a case of acute mania which had lasted for eight days, and which, hypnotized with difficulty, quieted till recovery.

§ "Artificial Insanity" (*i.e.*, Delusions suggested in hypnotism), *Journal of Mental Science*, 1865, pp. 56 and 174.

some should have been found to attempt to apply it to part at least of the wide field of mental disease. When the careful study of hypnotism was taken up in 1878 by Charcot, at La Salpêtrière, in Paris, his colleagues in the management of that many-sided group of hospitals and asylums left the responsibility mainly on his shoulders alone, and no alterations of treatment were made in the wards for the insane. It was the generally-received belief then that hypnotism was powerless with the insane; that they would not attend, and, therefore, could not be hypnotized, and no one made any attempt at it. And, at the same time, Liébeault's established opinions that insanity was out of the range of hypnotism turned aside from it the fresh enthusiasm of the Nancy school, when they began their work in 1882 upon all other forms of disease, determined to disregard any limits of hysteria or nervous temperament to which Charcot had almost entirely confined his experimental, as well as his therapeutic, practice. Bernheim, a few years later, in his summary of the clinical results at Nancy,* frankly avows that though he had succeeded in hypnotizing about 75 per cent. of all patients with all varieties of other diseases, yet had not hypnotized a single insane person. He had brought out strongly, however, the very useful effect that a suggestion given in hypnotism could have on feeling and action after the hypnotism had passed away, and when the person affected had lost all memory of the origin of the suggestion, and was entirely without doubt that he was acting on his own natural ideas and impulses, when he was really acting on "a post-hypnotic suggestion."

Meanwhile, in La Salpêtrière, in the wards for mental disease, Auguste Voisin had begun, even in 1880,† to make some attempts at hypnotizing one or two of his patients; and in June, 1884, at a meeting of the Société Médico-Psychologique, at Tours, he very much surprised and interested his audience by telling them the story we have epitomized lower down (Case 1, p. 194). Subsequent very patient trials on his part have furnished a few successes that have been published; the total number of the insane affected by him, after considerable experience, he claims to have been 10 per cent.† The same methods were also applied, with more frequent success, to many bad habits

* "De a suggestion," 1886.

† "Comptes Rendus du Premier Congrès International de l'Hypnotisme." Paris 1889, p. 147.

and hysterical abnormalities that are hardly reckoned within the strict English boundaries of insanity. With these we have not attempted to deal, though we should be sorry to be thought to deny in any way their importance, and the importance of the treatment.

The vigour and success in various lines of the hypnotic movement in Paris and Nancy stirred up a good deal of imitation and interest, especially in the other parts of France, and in Switzerland, and a similar interest has spread from some points in Germany, Sweden, and Italy ; but very little success, and, indeed, very few attempts have been as yet recorded in the hypnotic therapeutics of insanity.

Though the chief clinical teachers of hypnotism at Nancy have not encouraged the devotion of any attention to the hypnotization of the insane, yet Prof. Forel, of Zürich, has most energetically thrown all the strength of the impulse which he acquired at Nancy into the treatment for a time of his asylum patients, and has given a short *résumé* of all the cases he has tried, good or bad, successful or unsuccessful, with the frankness which in such novel and uncertain territory as this is the surest guide to truth.

It is because we are strongly of opinion, in a matter affecting what is perhaps the most serious group of diseases with which the physician has to deal, that the whole evidence, so far as we have been able to gather it from the scattered published records in various quarters, should be open to inspection, that we have ventured to trouble our readers with a somewhat voluminous *résumé* of cases, and to publish others which lead merely to a negative conclusion. That the possibilities of the treatment of insanity by hypnotism are exhausted it would be very hasty to assert ; but that the very elaborate conditions—probably both in subject and agent—for its useful application are at present undetermined it would be very rash to deny ; and it is to be hoped that so long as the advantage of the patient is kept strictly in view, some fuller trials and further elucidation of the problem may be possible.

We give first a chronologically-tabulated list of patients under different observers ; we can only wish it were more complete in all cases, both in the unsuccessful as well as the successful ones, that if possible there might be more clue to the *rationale* of the treatment.

*Success of
Hypnotization.*

Yes, with difficulty.

History before Hypnotism.

F., æt. 22. A woman who was arrested in Paris on the charge of stealing, and sent to prison (St. Lazare); there examined by Voisin, pronounced insane, and remitted to Salpêtrière (March 1, 1884), where she remained for three months in acute mania. Physically strong, coarse, and violent, she boasted that she had fifty Italian husbands, would kill them all, etc.

Yes, with difficulty.

F., æt. 25. For five years she had suffered from convulsive attacks, with hallucinations of sight and hearing. There had been crises of great violence, with refusal of food, for a week or fortnight.

Results.

On May 31, when she was in a condition of great violence and under restraint (*camisolée*), M. Voisin attempted to hypnotize her for the first time. She would not give any attention to his finger, which he held just above and between her eyes, but could not avoid his face, which he held for a long time just in front of hers, and after a long struggle fell asleep for 3½ hours. This treatment was continued every day or every other day. Occasionally no sleep was induced; often it was not induced until after two hours' labour. When obtained it lasted for 10 or 12 hours on an average; once for 23 hours (June 13). Violent crises continued to arise, and hypnotism was successful in stopping them very quickly. The condition between hypnotic sleeps was at first restless and despondent. Then post-hypnotic suggestion was tried by MM. Voisin and Gomet (*interne*), and notable improvement followed. The patient became obedient to the suggestions, decent, and friendly to her late enemies. She had no memory of what was suggested to her in a hypnotic state. She was discharged completely cured.

She was first hypnotized in the Salpêtrière, during a condition of acute mania and great violence (Nov., 1884). The attempt was very long and difficult. She was restrained by five or six attendants, and her eyelids held open whilst M. Voisin tried to get her to look either at a magnesium lamp in his hand or at his own eyes. After more than two hours of resistance she yielded, and then rapidly went to sleep, her voice growing gentle. It was then suggested to her to sleep for 23 hours, which she did, and took food during sleep, and attended to her wants as M. Voisin suggested. During what would otherwise have been her excited states, he only allowed her half-an-hour of waking in the 24 hours. During this she was usually quiet. This plan was carried out for seven consecutive days. In less excited states she was kept in hypnotic sleep for 18 hours out of the 24. After four months' treatment she ceased to have any more maniacal attacks,

Observer.

Auguste Voisin
(Médecin de la
Salpêtrière).—
Case 1.¹

Auguste Voisin.—
Case 2.²

and, writing two years later, M. Voisin reports that she has had no relapses, and is employed as a washerwoman in the Salpêtrière.

Yes.

Marie Da—, æt. 25. She came of a phthisical family, and was herself delicate. In 1875 (æt. 15) she began to have *attaques de nerfs*. In 1885 (æt. 25) she began to have painful metritis, and as that got better insanity came on gradually.

Auguste Voisin.—
Case 3.³

On Dec. 10, 1885, light hypnotism was induced, but broken up rapidly by a hysterical attack. On Dec. 16 she was hypnotized by gazing at M. Voisin's finger between and above her eyes, and suggestions were made on three points:—(a) that she should have no more visions (hallucinations); (b) that she should be able to recognize the colour orange with her left eye; (c) that she should wake from her present sleep at 11.30 a.m. She woke at 11.30 a.m., and went to M. Voisin, saying she could see no one coming after her now (late hallucination), and he found the left eye could recognize orange. She was hypnotized every other day for nearly a fortnight. After Dec. 19 there were no more morbid symptoms. On Jan. 5, 1886, she was allowed to go out, and was seen again March 29, when she had no symptoms of relapse.

Yes, easily.

Cecile Lec—, æt. 17. On Nov. 22, 1885, her father died, which affected her very deeply. She was sleepless and refused food. Then, with hallucinations of her father, ideas of suicide and insanity came on.

Auguste Voisin.—
Case 4.⁴

Yes.

Pauline Dav—, æt. 21. She had had convulsive attacks since she was 18 months old, attributed originally to fright. When about æt. 18 these were followed by an excited condition, with erotic ideas, hallucinations of sight, and hearing. These were

Auguste Voisin.—
Case 5.⁵

On Dec. 9, 1885, she was easily hypnotized by M. Voisin, and suggestions were made that she should see no more visions nor hear sounds of her father. This was insisted upon at a second hypnotization next day, and nothing more was seen or heard. The other morbid symptoms also at the same time disappeared. She went out from the Salpêtrière in a month, and was seen in good health, without relapse, two months later.

She was restless, and occupied with erotic ideas and hallucinations. The senses were normal; there was no anæsthesia, but frequent globus. On Jan. 3, 1886, M. Voisin produced hypnotism easily by fixing her attention on two fingers held above the base of her nose, and suggested that she should have no more to do with her imaginary lover, should have no more hallucinations, and wake at a given hour. She woke when

History before Hypnotism.

Observer. *Success of Hypnotization.*

at first treated in the Hôpital St. Anne, but she was moved to the Salpêtrière, Dec. 31, 1885.

Auguste Voisin.—
Case 6.

Mdme. de T., æt. 45. For 25 years melancholia and hypochondriasis, with five regular lethargic attacks in the day at 8 a.m., midday, 3 p.m., 6 p.m., and 9 p.m., lasting from 8-40 min. There is not loss of consciousness, but sudden arrest of movement, closure of eyes, look of pain, some tremors running through face, arms, and body, and the closed hands stretched out.

Yes, easily.

Auguste Voisin.—
Case 7.

Mdme. G., æt. 25. Melancholia, extreme inanition (weight, 5st.), with attempted refusal of food for eight years.

Yes.

Auguste Voisin.—
Case 8.

Mlle. B., æt. 18. After severe hysteria she had sunk into melancholia, with refusal of food for several months.

Yes, with great difficulty.

Results.

ordered the first time, and after three further hypnotizations all the suggestions were fully carried out. The hypnotism was continued on alternate days for a month; then once a week for two months without suggestions. She was allowed to visit her relations often, and after four months there was no return of the morbid symptoms.

M. Voisin arranged to come to attempt hypnotization five minutes before the time of a lethargic attack. There was no difficulty in inducing a hypnotic sleep after a few minutes, and then it was suggested to her that she should not wake for an hour, which was not always carried out, but after repetition of hypnotism at the five customary hours of attack the morbid lethargy did not recur.

When she was first hypnotized at 6 p.m. she was told to sleep till 8 a.m., and then eat whatever was given her. After sleeping as directed, she ate two plates of meat, two of vegetables, with bread, etc., saying she was hungry and in no discomfort. This was repeated every other day, and she was even induced to join in a wedding breakfast. After having been hypnotized a dozen times on alternate days, the intermediate days could also be affected by suggestion in advance, and finally she quite recovered normal nutrition.

Hypnotization was tried by fixing her attention on a magnesium light, a shining button, the operator's finger and eyes, but without result. However, after twelve trials, each of three-quarters of an hour, with an ophthalmoscopic mirror, hypnotism was induced, and suggestion given of twenty hours' sleep, to be both accompanied and followed by a full meal. This was carried out daily for a fortnight, when the treatment was given up for a time from an attack of photophobia.

Auguste Voisin.— Case 9.	Mdme. M. Chronic hereditary mania, with refusal of food for several months. Many hallucinations, insomnia, and fits of violent temper.	Yes.	She was hypnotized in 20 min., and then told to eat what was given her, and wake after an hour and a half. During hypnotism she took a good meal, was awakened, and went to her usual dining-room without any knowledge of what she had done. This was repeated several times with success, and some restraint put on her violent temper, but the treatment was interrupted by relations.
Auguste Voisin.— Case 10. ⁷	Mdme. C., æt. 48. Recurrent insanity. In a previous attack she had been quiet; she was hypnotized then by M. Voisin, and recovery followed. In July, 1886, an acute attack was brought on by the sudden death of her mother; there was great emotional excitement and confusion of ideas.	Yes, with great difficulty.	On the first trial she was hypnotized after an hour by looking at M. Voisin's finger, held above the bridge of the nose; on the second trial she was violent, and was held by five attendants, and hypnotism could only be induced after the eyelids had been kept open by a speculum, and a magnesium lamp kept before her for ten minutes. Suggestions for better behaviour were made, and, though not carried out in detail, the patient could be placed in a quiet sewing class next day.
Auguste Voisin.— Case 11.	Mdlle. Tier—, æt. 40. Suicidal mania, with stupor and refusal of food. She was kept in a strait-waistcoat, to prevent suicide.	Yes.	M. Voisin requested M. Ochorowicz to hypnotize her, which he did in ten minutes, with one hand on her forehead, using the other to make passes before her face. M. Voisin ordered the strait-waistcoat to be taken off, and told her to go to sleep for an hour, and to take the food offered her. This she did, and previous offensive habits, as well as her sleeplessness, were remedied after a second and third hypnotization. Hypnotic treatment was continued, and after a month she had lost delusions.
Auguste Voisin.— Case 12. ⁸	Mdme. Bi—, æt. 31. Family history good. Married life unhappy. Delusional insanity, with hallucinations, and ideas of suicide supervening.	Yes, on second trial.	She was at first treated with Pot. Bromide, etc., for nearly three months; then by hypnotism, which was successful after the first trial; suggestions against her hallucinations and suicidal ideas (and general depression) were made and carried out in part at once, and entirely after a fortnight's treatment.
Auguste Voisin.— Case 13.	Mdlle. Du—, æt. 35. Emotional insanity, with resistance to all control, and occasional outbursts of violence.	Yes.	There was no improvement in the first six weeks, and hypnotism was then tried. Three attendants held the patient, and by pressure on the eye-balls sleep was soon obtained. Suggestion was made that she should go to bed and sleep till next morning. This was carried out, and during the treatment for the next month she quite lost her morbid symptoms.

Observer.	History before Hypnotism.	Success of Hypnotization.	Results.
Dufour, Médecin en chef de l'Asile St. Robert (Isère).—Case 14. ⁹	M., æt. 27. Melancholia, with stupor, following a criminal conviction. He answers only by signs; is in frequent terror he is going to be killed, and has auditory and visual hallucinations. There was some loss of hallucinations in the two months before hypnotism, but no recovery of speech or memory. Treated by baths, tonics, and chloral.	Yes, but never could be brought into deepest hypnotism.	Light states of hypnotism were easily induced, and suggestions in hypnotism as to tastes and smells readily accepted. He was ordered to give up his remaining hallucinations, and did so quickly, and during treatment by hypnotism gradually improved, and his memory and faculties returned.
Dufour.—Case 15. ¹⁰	M., æt. 26. In a condition of stupor after the loss of a friend. Answers questions by signs only. Various treatments tried.	Yes, on second trial.	He was not hypnotized on first trial, but easily after that; he reacted best to suggestions when in a state bordering on sleep, but not quite unconscious. His symptoms improved rapidly, and he became less affected by hypnotism as he grew better. Recovery in three weeks.
Dufour.—Case 16. ¹¹	M., æt. 23. He had had hysterichorea as a boy, which had got well, but returned, æt. 23, with violence, accompanied by many hallucinations, loss of moral sense, and ideas of persecution and suicide.	Yes, easily.	Hypnotism was easy, and seems to have been used at first in restraining fits of violence. Later on, when there was more melancholia, hypnotic suggestion led to some good sleep, good appetite, and relief from ideas of persecution.
Jules Voisin.—Case 17. ¹²	F., æt. 24. Melancholia, with morbid erotic ideas; insomnia and much onanism; in a weak, depressed state, unable to work, etc.	Yes.	Hypnotized by looking at a bright object; suggestions of good sleep and health repeated on six consecutive days, and followed by good sleep, great improvement, and almost complete absence of sexual ideas. She could soon take up work as a teacher, and was hypnotized once a week for six weeks. No relapse noticed. Then hypnotized three times in six months, and is reported as remaining quite well after ten months.
G. Burckhardt, Director of Asylum of Préfargier, Switzerland.—Case 18. ¹³	F., æt. 43. Hypochondriasis of a gastric type; restless and sleepless; not improving.	Yes.	The first few trials produced light sleep; afterwards this grew deeper, and was accompanied with considerable improvement.

G. Burckhardt.— Case 19.	F., æt. 67. Hereditary insanity, with ideas of persecution and also exaltation. Insomnia for several years.	Yes.	In the first trials sleep was only induced after a long time, and a short preliminary convulsive stage, but afterwards quickly and quietly.
G. Burckhardt.— Case 20.	F., æt. 67. Passive melancholia, with occasional violent crises; obstinate constipation.	Yes.	First put to sleep by fixing the eyes; then by command. Temporary relief for a few hours, and some improvement generally; no effect on constipation.
G. Burckhardt.— Case 21.	F., æt. 28. Melancholia (hereditary), with alcoholism, and some violent crises with hallucinations.	Yes.	First hypnotized by fixing the eyes; afterwards by command when in a violent state. Temporary relief, so that she could leave the asylum, but she relapsed shortly.
G. Burckhardt.— Case 22.	F., æt. 28. Acute puerperal mania (puerperal fever and phlebitis). Violent crises, with lucid intervals.	?	She was never successfully put to sleep, but became remarkably obedient to suggestions that she should keep quiet, etc. The violence ceased, and improvement began.
G. Burckhardt.— Case 23.	F., æt. 44. Confirmed morphia habit; much vomiting; insomnia; hysteria gravis.	Yes.	Put to sleep (after all morphia had been stopped) by fixing her eyes on hypnotizer's eyes at a very short distance. On first trial sleep of several hours, increasing to eight or ten hours a night. Slight gasping and struggling before hypnotic sleep, but it was generally obtained in a quarter of a minute. Refreshment after hypnotic sleep as good as after natural. Gradual general improvement, with hope of cure.
Forel.—Case 24. ¹⁴	F. <i>Folie circulaire</i> .	Yes.	<i>Nil</i> .
Forel.—Case 25.	F. <i>Folie circulaire</i> .	Yes.	<i>Nil</i> .
Forel.—Case 26.	M. Recurrent mania (<i>periodischer maniacus</i>).	Yes.	He was hypnotized easily every day in a lucid interval, and no mania recurred up to the time of record, but that constituted no proof of cure.
Forel.—Case 27.	M., æt. 33. Congenital dementia; at times very violent.	Yes.	Hypnotism was begun easily when he was in a fairly quiet state, and he grew obedient and industrious under it. He was then sent on to another asylum, where Bleuler continued the treatment with good results.
Forel.—Case 28.	F. Moral insanity (<i>moralische irresein</i>).	No.	<i>Nil</i> .
Forel.—Case 29.	F. Moral insanity.	No.	<i>Nil</i> .
Forel.—Case 30.	F. Idiocy, with periodic mania.	No.	<i>Nil</i> .

<i>Observer.</i>	<i>History before Hypnotism.</i>	<i>Success of Hypnotization.</i>	<i>Results.</i>
Forel.—Case 31.	F. Chronic melancholia; insomnia.	Yes.	Hypnotism was easily induced at first by fixed attention, and afterwards on the mere receipt of a written order. Some physical improvement, but little mental change.
Forel.—Case 32.	F. Melancholia; insomnia; extreme hyperæsthesia.	No.	<i>Nil.</i>
Forel.—Case 33.	M. Chronic hypochondriasis.	No.	<i>Nil.</i>
Forel.—Case 34.	M. Chronic hypochondriasis.	No.	<i>Nil.</i>
Forel.—Case 35.	M. Chronic hypochondriasis.	Slight.	"Hypotaxia" produced, <i>i.e.</i> , loss of power over eyelids, and greater than normal stiffening of one arm. No mental improvement.
Forel.—Case 36.	F. Hysteria, insanity.	No.	<i>Nil.</i>
Forel.—Case 37.	F. Hysteria, insanity.	No.	<i>Nil.</i>
Forel.—Case 38.	F. Hysteria, insanity.	Yes.	Deep hypnotism produced, with amnesia and catalepsy. Patient does not obey suggestions, but grows quieter.
Forel.—Case 39.	F. Epileptic insanity, with much hallucination.	Yes, with difficulty.	Good rest obtained by hypnotism with some difficulty for four weeks, during which there was no fit, and decided mental improvement. Then epilepsy recurred, and hypnotism failed to stop it.
Forel.—Case 40.	M. Chronic dementia, with delusions.	Yes, very slightly.	Slight improvement after each sitting; nothing permanent.
Forel.—Case 41.	M. Ditto.	No.	<i>Nil.</i>
Forel.—Case 42.	M. Ditto.	No.	<i>Nil.</i>
Forel.—Case 43.	M. Ditto.	No.	<i>Nil.</i>
Forel.—Case 44.	F. Ditto.	Yes, very slightly.	<i>Nil.</i>
Forel.—Case 45.	M. Alcoholism, insanity.	No.	<i>Nil.</i>
Forel.—Case 46.	M. Chronic mania; very restless at night.	Yes.	When brought to a state of hypnotic somnambulism his ears were rubbed, and he was told his auditory hallucinations were gone. When awakened it was striking to see how no thought of them occurred to him for an hour or two; then they returned. Good hypnotic sleep was obtained in times of great violence by fixation of the eyes and stern command.

Forel.—Case 47.	M. Chronic dementia (in origin, alcoholic), with delusions; restlessness; insomnia.	Yes.	On second trial sleep was obtained; on third, somnambulism; after fifth, a good night's rest; and after seventh, no more delusions. For four weeks, industry and good progress; then relapse for three or four days to auditory delusions; then again improvement.
Forel.—Case 48.	M. Acute mania; convalescent.	No.	<i>Nil.</i>
Forel.—Case 49.	M. Acute mania (alternating with melancholia).	Yes.	Hypnotism made him quieter for twelve <i>séances</i> ; he had a dread of the thirteenth <i>séance</i> , and refused it, and was no better permanently.
Forel.—Case 50.	F. Melancholia.	Yes.	Hypnotic sleep, with some relief of anxiety, of tinnitus in the ears, and of home-sickness; now discharged as cured.
Forel.—Case 51.	F. Melancholia, with anxiety and want of sleep.	Yes.	Hypnotic sleep, with relief of anxiety and of noises in the head, but no great mental improvement.
Forel.—Case 52.	F. Melancholia.	Yes, slight.	Hypnotism only induced loss of control over the muscles of the eye; no considerable improvement.
Forel.—Case 53.	F. Melancholia.	Yes, slight.	Similar slight results of hypnotism; improvement followed (? due to the suggestion), and in a short time she was discharged cured.
Forel.—Case 54.	F. Acute melancholia, which had lasted two years.	Yes, slight.	Similar slight results; some improvement in nutrition and sleep.
Forel.—Case 55.	M. Restless hypochondriasis.	No.	<i>Nil.</i>
Forel.—Case 56.	M., æt. 15. Unusual case of recurrent attacks about every eight days of emotional disturbance (laughing, crying, etc.) and bewilderment. Complete forgetfulness of these in the intervals. Mother epileptic; no distinct epilepsy in the son.	Yes.	Hypnotism induced such deep sleep that very little suggestion was taken. Under hypnotic treatment there were no attacks for twelve weeks, and his general improvement was encouraging. But after that the attacks returned, and though he could be hypnotized whilst they lasted, yet there was not much mental improvement.

¹ "Annales Medico-Psychologiques," 1884, Series 6, Vol. xii., 289. ² "Revue de l'Hypnotisme," 1886, i., 41. ³ "Ann. Med. Psych.," 1886, Series 7, Vol. vii., p. 6. ⁴ *Ibid.*, p. 460. ⁵ *Ibid.*, p. 3. ⁶ Cases 6-9, Association Française pour l'Avancement des Sciences, Congrès de Grenoble, 1885 (reprinted as a pamphlet). ⁷ Cases 10, 11, *Ibid.*, Congrès de Nancy, 1886 (reprinted as a pamphlet). ⁸ *Ibid.*, Congrès d'Oran, 1888. ⁹ *Ibid.*, p. 244. ¹⁰ *Ibid.*, p. 245. ¹¹ *Ibid.*, p. 246. ¹² "Revue de l'Hypnotisme," ii., 242 (Feb., 1888). ¹³ Cases 18-23, *Ibid.*, iii., 56 (Aug., 1888). ¹⁴ Cases 24-56, "Correspondenz-Blatt für Schweizer Aerzte," 15 Aug., 1887, p. 483-488.

In England this method of treatment was specially brought under the notice of the profession at the Leeds meeting of the British Medical Association in August last, by a paper read in the Psychology Section by Dr. Auguste Voisin, but he did not confine his remarks to the treatment of cases of insanity. The results detailed then were very startling. Previously to this, as a result of reading accounts of the cases reported above, we had determined to conduct a series of experiments at Bethlem Hospital, and the results are embodied in this paper in detail, it being hardly necessary to add that our attention was entirely confined to cases of insanity. The experiments were spread over the past year, and though briefly referred to at the Leeds meeting, the material was too large to be detailed there.

In order to render success more probable, we were by the kindness of some members of the Psychical Research Society allowed to have the services of their experienced hypnotist, Mr. G. A. Smith.

The principle we felt ought to be kept in view throughout was that any experiments of this nature in a hospital or asylum for the insane ought to be made entirely with a therapeutic object, that is to say, that they should not be made merely for the purpose of elucidating physiological problems.

There appears to be another argument against indiscriminate hypnotizing of the insane, and that is the danger of starting in the patient's mind the idea that he or she has been "mesmerized," and made worse thereby. The frequency with which patients believe they have been "mesmerized" when no such experiments have been made is already well recognized.

The term "mesmerism" is better avoided when lunatics are being dealt with, and so attendants were instructed not to use it before patients. Further, it was made a rule that in the case of female patients an attendant should always be present. No experiments were made on male patients.

Much valuable help was given by Dr. Goodall, at that time clinical assistant at the Royal Bethlem Hospital, his interest in the experiments being very great, and his notes specially valuable. The latter have been largely made use of.

CASE I.—M. H., æt. 15½. No neurotic inheritance. History of "hysteria" for three years, formerly somnambulist. Attack of excitement associated with masturbation in August, 1888, followed in November by depression passing into resistance and stupor, necessitating artificial feeding. Dirty habits.

December 28th, 1888.—Attempt to hypnotize (by Dr. Goodall,

clinical assistant), by pressure on eyelids. In about twenty-five minutes limbs became plastic, eyes remained closed for a short time, patient walked round the room with slight assistance instead of resisting, obeyed orders as to movement of hands, etc., was induced to eat bread and butter. Very soon relapsed into her former apathy and resistance.

January 3rd, 1889.—In her natural state she now obeys directions (as opening mouth, touching face, etc.), but all commands are more readily obeyed in the state induced by closing the eyes and gently pressing on the eyeball. 4.15 p.m.—Comes under control more readily. On direction she takes bread and butter, glass of milk, drinking being somewhat clumsy. No real sleep ever produced.

January 4th.—Took about half her breakfast herself (being urged occasionally), fed by spoon with the rest. 1 p.m., much resistance to food. Eyes were then kept closed for from twenty to thirty minutes, and in the state induced she took cut-up meat, potatoes, bread, and tapioca pudding, and drank some beer. Whenever there was disposition to refuse food, manipulation of eyes for eight or ten minutes made her comply much more readily. Was constantly told "You must eat and drink."

January 6th.—After closure of eyes for ten minutes drank two glasses of milk (bit and broke the glass) and also took meat and potatoes.

January 7th.—Took half her breakfast. At tea time again experimented on; readily fed herself on a basin of bread and milk and drank milk.

January 8th.—Took food well. Partly dressed herself. No cleaner in habits. No attempt at hypnotism.

January 11th.—Attempt at hypnotism by Mr. G. A. Smith. He endeavoured to gain her attention and to get her to fix her eyes on his face with very little success. Dr. Goodall also failed. No further trial made by Mr. Smith.

January 15th.—Improving rapidly; cleaner; feeds herself; more intelligent.

February 10th.—Continues to take food, but very apathetic; habits dirty again. About a week ago two attempts to hypnotize were made, but her attention could not be obtained in the least. She laughed and cried by turns.

March 2nd.—Improved again, but without any attempt at hypnotism having been made. Tidier, cleaner; takes food; reads the paper, but still dull and confused; less emotional.

She was discharged recovered on April 17th.

The patient was perhaps lightly hypnotized by manipulation of the eyeballs; certainly an improvement took place in her feeding from the time it was commenced, but this was no doubt also due to the persistent attempts to induce her to eat, and to the very large amount of personal attention given to the case by Dr. Goodall. It is worthy of

note that the utmost that was produced was a change from resistance to flaccidity, and a certain amount of obedience to orders as to taking food; no real sleep was induced, and a regular attempt to hypnotize by fixing the attention completely failed; further, after a temporary relapse, improvement began without any attempt to hypnotize.

CASE II.—J. H., æt. 26; no neurotic inheritance. History of diabetes for three years (loss of flesh, voracious appetite, thirst, urine 5-6 quarts daily). For three months before admission occasional violence, destructive, dirty habits, followed by silence and cataleptic stupor. Admitted in this condition with saliva dribbling, eyes constantly closed, anæsthesia of skin, no nasal reaction to pepper; urine 1025, no sugar, oxalates, apparently no excess in quantity (but quantity not measured on account of involuntary evacuation), spoon-fed, dressed, etc.

January 12th, 1889 (six months after admission), no change; attempt at hypnotism by Mr. G. A. Smith. Obeyed the operator's command to shut her eyes, but would not obey when he told her to open them on his saying "three." He repeated the words one, two, three, the last with emphasis, and encouraging her by stroking the forehead upwards, about six times with no obvious effect. Then he assured her he saw her mouth opening; but there was no obvious result.

January 18th.—A second trial. She shut the eyes when ordered, after some opposition, but opened them without any order to do so. He encouraged her to open her mouth, but she did not do it. She followed his eyes when he looked at her and moved his head from side to side. There was slight "flexibilities cerea," the arm was stretched out by the operator, and remained extended, but was not raised when ordered.

January 22nd.—Attempt by Dr. Percy Smith and Dr. Goodall to fix the attention by light from ophthalmoscope mirrors for half-an-hour. No effect whatever produced.

January 24th.—Attempt to hypnotize by pressure on the eyeballs for three-quarters of an hour; no effect. Would not open mouth or eyes, get up, or do anything.

April 27th.—Has improved physically, but still in stupor.

July 3rd.—Discharged uncured.

CASE III.—K. K., æt. 28, schoolmistress. Admitted November 22nd, 1888. No neurotic inheritance. Catamenia always irregular; headaches for two years; losing flesh for one year. Neurasthenia. Sent to St. Thomas's Hospital under Dr. Sharkey for massage. Became excited while there before the massage was begun, and almost immediately after examination of the eyes under atropine. Admitted to Bethlem wildly maniacal, and refusing food, and then after a time, as she became quieter, having persistent delusions about her clothes, and very suspicious of attendants and others.

January 11th, 1889.—Attempt at hypnotism by Mr. G. A. Smith.

Patient chattered at first, and her attention could not be gained. Her attention was at first distracted by the sight of one of the medical officers of St. Thomas's Hospital, whom she recognized in the room, but after five minutes she became quieter. She was ordered to go to sleep many times, but without result. She kept her eyes on the floor and was quiet, but nothing further happened.

January 18th.—Still very restless. Attempt to hypnotize for about half-an-hour, Mr. G. A. Smith and Dr. Myers alone being in the room with her. She was ordered to go to sleep; gradually got rather quieter than on the 11th, but the hands were restless throughout, and she did not go to sleep. Took some milk when told, but the night before had eaten bread and milk when given to her by the attendant.

January 25th.—Patient has been very confused the last few days, making "passes" before her own eyes as if in imitation of the hypnotist. Habits unclean. Mr. Smith was left alone with the patient and nurse for about forty minutes, so that her attention should not be distracted. After about ten minutes, slowly drank some milk, holding the cup herself. She was very quiet, but was not hypnotized.

February 1st.—A similar attempt. Did not open or shut eyes in obedience to the hypnotizer.

February 8th.—A further attempt, with no effect.

From this time till early in September she slowly improved, gaining flesh steadily, taking food better, and gradually losing suspicion and hallucinations; she was then sent to the convalescent hospital, and discharged well in November. In this case one cannot attribute the recovery nor, it would appear, any of her improvement, to the attempts at hypnotism.

CASE IV.—M. W., æt. 42, single, attendant on an invalid lady; inheritance of phthisis and alcoholism; admitted to Bethlem on July 5th, 1888, suffering from melancholia, with dread of impending evil, and refusing food; subsequently became resistive, dirty in habits, and then improved up to a certain point, taking food well and gaining flesh, but remaining dull, silent, apathetic, and dirty.

January 18th, 1889.—Attempt at hypnotism by Mr. G. A. Smith. She made no opposition, but after twenty minutes no perceptible effect was produced by attempts to engage the attention and get the eyes closed.

January 25th.—Another attempt. Patient followed the operator's eyes when he moved, but there was no further effect.

February 1st.—Another short attempt. Closed her eyes when told, but no further effect. No further attempt was made. The patient remained dull and apathetic, but very slowly improving, and in July last went to the convalescent hospital. She has since been discharged, but is not perfectly well, though able to be at home.

The attempts at hypnotism may be regarded as entirely without result.

CASE V.—C. H., æt. 25, married; no neurotic inheritance. Confined one month ago. Before admission to Bethlem (July 4, 1888) had been in University College Hospital for three weeks with supposed puerperal fever, her first child having had scarlet fever three weeks before the present confinement. On admission was wildly maniacal. At first was very ill, but rapidly improved physically, and then passed into “secondary stupor,” with refusal of food, and dirty habits.

January 11th.—An attempt to hypnotize her by Mr. G. A. Smith. Her attention could not be fixed in the slightest degree, and the attempt was abandoned. She has since been discharged uncured, having remained in the same condition.

CASE VI.—R. F. G., single, governess, æt. 28, admitted to Bethlem January 29, 1889. Great aunt insane, grandmother phthisical. For six months had suspicions, ideas of persecution by “improprieties,” hallucinations of hearing, refusal of food, thinking it wrong to eat, exaggerated ideas of religious duty. On admission refused food utterly in order to confound a supposed persecutor whom she heard telling her she must eat. As the patient had considerable intelligence, and it was thought easy to gain her attention, an attempt was made to hypnotize her in order, if possible, to make her lose hallucinations and take food by suggestion.

January 31st.—She was made by Dr. Goodall to look at a lamp-light reflected in a mirror for a quarter-of-an-hour, till she felt fatigue and declined to go on. For half-an-hour then her eyelids were kept closed, and she was told she felt sleepy, and was going to sleep. She denied the latter, but said she felt drowsy. She was then told she would no longer be harassed by her persecutor, and that she would take the food about to be given to her. She said she felt “at peace,” and that the persecutor had no “influence” then, but that it would return in force when this proceeding should be finished. This was denied, and she was also told that the “influence” could be removed at any time by the process adopted. She sat whilst food was obtained, said she would eat willingly, and had a good meal. The following morning she refused her breakfast, but took dinner. She doubted the propriety of submitting to “mesmerism.”

February 4th.—Has taken food regularly; says she is less persecuted.

She eventually recovered perfectly. No further attempts to hypnotize were made.

The treatment might be described as suggestion without hypnotism (*suggestion à veille*), as she certainly was not really hypnotized.

CASE VII.—M. B., æt. 45, single, admitted to Bethlem Hospital on May 17, 1888, suffering from a severe attack of acute mania resulting from overwork in nursing her mother. An aunt insane, a sister epileptic, and two brothers alcoholic. There having been no mental improvement in spite of prolonged tepid bath, sulphonal,

hyoscyamine, paraldehyde, and the occurrence of severe carbuncles on the head and arm, attempts were made to hypnotize her on February 1st, 8th, 11th, and 15th. During the attempts, which were made with great patience, she remained noisy, violent, and obscene, her attention could not be fixed in the slightest degree, and she struck at the operator and rolled off the chair if not restrained. No effect whatever was produced.

Subsequently discharged uncured.

CASE VIII.—E. S. B., æt. 19, single, draper's assistant, admitted to Bethlem Hospital January 15th, 1889. Mother died hemiplegic; no other inheritance. Patient formerly somnambulist; has had two slight attacks of depression before. Present attack, seven weeks' duration, melancholia passing into stupor, with refusal of food.

February 1st.—Attempt at hypnotism by Mr. G. A. Smith by passes before the eyes, with stroking. Patient appeared to become drowsy, her eyes were closed, and she was told her eyelids were too heavy for her to raise; she was challenged to raise them, and failed. She was told they would open at the word "three," and they did so. Her hands being clasped, she made a slight but unsuccessful attempt to separate them when told to make the effort, at the same time being told she would fail. No further effect was produced. Dr. Goodall then took the place of Mr. G. A. Smith, the patient not appearing to notice the change. In obedience to order, she drank a large mug of milk, holding the mug. With much persuasion she took bread and butter, and protruded her tongue when told. Had not taken food with her own hand previously.

February 8th.—The same effect produced. Drank milk with a good deal of persuasion.

February 13th.—The same effect produced by Dr. Goodall; drowsy state, with inability to open the eyes when the inability is insisted on. Great difficulty in getting her mouth open, though she becomes more plastic in the partially hypnotized state. Ate six slices of bread and butter with much urging, and drank one pint of milk.

February 14th.—The same effect.

February 15th.—Mr. G. A. Smith could produce no further effect, and could not gain her attention. At his command she slowly drank a cup of milk.

February 20th.—Another attempt made, but no further stage of hypnotism reached. Holds bread and butter in her hand, but will not eat it. Takes just sufficient food by spoon, etc., to render feeding with tube unnecessary. No mental improvement. Further attempts were abandoned.

Since then the patient has very slowly and gradually improved. She has been treated with galvanism and shower baths. At the present time she is at the convalescent establishment, and is nearly well.

Although the patient appeared susceptible at first, and it was

thought that she could be hypnotized, yet the results obtained were very small; the orders to take food needed to be repeated with great energy and persistency before the desired effect was produced, and offered a marked contrast to the ready obedience of one really hypnotized. The case seems to be very parallel in symptoms to Case I.

CASE IX.—H. S., æt. 56, housewife, admitted January 21st, 1889. No inheritance. Melancholia of four months' duration, with considerable agitation and suicidal tendency, not improved by paraldehyde and sulphonal.

February 15th.—While in this condition of active misery an attempt to hypnotize was made by Mr. G. A. Smith. She made no opposition, and was quite quiet while the operator kept his hand on her forehead, but did not go to sleep as ordered. Does not seem able to fix her attention.

February 16th.—One other attempt, quite unsuccessful.

Patient has since been discharged uncured.

CASE X.—M. J. E. S., æt. 39, housewife. Half-brother formerly in Bethlem. Has suffered from uterine displacement, the manipulations necessary for the treatment of which appear to have produced a highly sensitive, self-conscious condition, which ended in acute mania, with great excitement and violence. No improvement with sulphonal.

February 22nd.—Attempt at hypnotism by Mr. G. A. Smith. No resistance, kept quite quiet for about fifteen minutes, but did not lose control over the eyelids. After half-an-hour grew more restless and violent. No further trial, not the slightest hypnotic effect being produced.

Subsequently discharged recovered, but has since relapsed.

CASE XI.—L. W., æt. 40, no occupation, admitted February 11th, 1889. No inheritance. Agitated melancholia of eight months' duration, with claustrophobia and alteration of muscular sense. She also had absent knee-jerks and Argyll Robertson pupils, and swaying with the eyes shut, but no other ataxic symptoms. Before admission she had been subjected to hypnotism.

February 22nd.—Attempt at hypnotism, but patient resisted the whole process.

April 10th.—Still as restless and agitated as ever, generally standing at the door, and in floods of tears; says she feels like a balloon. Attempt at hypnotism by Mr. G. A. Smith. After some resistance she became lightly lethargic, and she could not open her eyes when told she would fail to do so. In this condition it was suggested to her that when she came to she would feel better, and that she was not to go and stand at the door again. She was then roused, and immediately began to descant on her wretched condition. After keeping away from the door for about ten minutes she became restless, and returned to her former post. No further attempt made.

Patient was shortly afterwards removed by her friends, so that we had no further opportunity of trying the effect of hypnotism.

CASE XII.—J. A. W., æt. 17, single, dressmaker, admitted January 15th, 1889. Paternal aunt melancholic and alcoholic, cousin weak-minded and epileptic. Paternal aunts intemperate and hysterical. Several brothers and sisters died of infantile convulsions. Admitted with acute mania of emotional and erotic type of six weeks' duration.

March 7th.—Attempt at hypnotism by Mr. G. A. Smith. In an emotional state, laughing and crying, untidy and obstinate. Attempt by pressure on eyes, and by passes before the eyes. Patient quiet for twenty-five minutes, but no control gained over the eyelids. After twenty-five minutes, in answer to the remark, "Now you are asleep," she quickly said, "No, I am not; I'm conscious, that's all I know." She began to laugh suddenly, after half-an-hour, and remarked, "I had this done to me before by a lady," then suddenly shouted, "I hate Nelly Farren; I hate her photograph, Jack Shepherd and all."

March 21st.—No improvement in the case. Renewed attempt at hypnotism. Resistance and talkativeness for two or three minutes, then quiet for forty-five minutes. She only spoke five or six times, and laughed slightly three or four times; no control gained over eyelids. Sleep suggested, but without result.

March 27th.—Quiet gained as before, but no sleep.

April 2nd.—The same result.

No further trial was made.

Patient since discharged uncured.

CASE XIII.—M. J. S., scholar, æt. 18, admitted February 9th, 1889. No inheritance. Case of acute mania with great excitement, resulting from overwork at school. Refusal of food; great exaltation.

March 7th.—Attempt at hypnotism by Mr. G. A. Smith. Very talkative and humorous, laughed, and threw her hair about. No attention gained in a quarter-of-an-hour.

March 21st.—Some resistance at first; constant chatter. No attention gained after forty minutes.

No further attempt.

Since discharged recovered.

CASE XIV.—F. K. S., lady's-maid, æt. 25, admitted December 27th, 1888. Second attack of insanity; no inheritance. Acute mania of three days' duration on admission.

March 7th.—Very excited and destructive. Attempt at hypnotism. Patient talking incessantly for twenty minutes. No resistance, but no control or attention gained.

March 27th.—The same negative result.

April 2nd.—The same.

No further trial.

Since discharged recovered.

CASE XV.—M. M., æt. 29, housewife, admitted December 27th,

1888. Third puerperal attack, after the birth of twins; confined three weeks; duration of insanity, two weeks. Wildly maniacal and obscene, dirty, destructive, and refusing food. Sleeps after sulphonal, but not without.

April 2nd.—Attempt to hypnotize by Mr. G. A. Smith. After some time she became quiet and whispering (noisy at first), but no other effect was gained in twenty minutes.

April 4th.—Another attempt with more resistance, with the same negative result.

No further attempt.

Patient since discharged recovered.

CASE XVI.—K. W., governess, æt. 46, admitted March 19th, 1889. Grandmother insane; brother three times in Bethlem Hospital. Illness caused by brother's insanity. Maniacal at first, then depressed and silent, refusing food, and resisting everything.

April 10th.—Attempt at hypnotism by Mr. G. A. Smith. No effect produced.

No further trial. Patient remains in the hospital in same condition.

CASE XVII.—M. T., single, æt. 16. No neurotic inheritance; three years ago had a short attack of excitement. Nine months ago was again excited, and taken to the Holloway Sanatorium; transferred thence to Bethlem July 3, 1888, in a state of complete melancholic stupor, with resistance, refusal of food, dribbling of saliva, loss of expression, and fixed gaze. She was, however, apparently conscious of surroundings, but would not speak.

January 9th, 1889.—Two attempts at hypnotism by closing and pressing the eyes were made by Dr. Goodall. These failed entirely, but on each attempt she manifested marked dislike to the proceedings, put her hand up and pushed away the operator, got up and walked away. She could be induced to walk across the room by proposing a repetition of the process. Lifted her hand to her face and put it down at request. A further attempt was made to hypnotize her by the light from a laryngoscopic mirror. She showed aversion to the process, putting up her hand and turning her head away. Bread and butter was brought, and she was told to eat. Swallowed after being loudly and frequently told to do so. By persuasion she ate three slices of bread and butter, slowly drank some water, but refused milk (discovered afterwards to have a delusion about milk). Subsequently she refused bread and milk, and when pressed to take it said, "Bread and butter," thus speaking for the first time.

After this she slowly improved, and daily did more and more in the way of feeding and attending to herself, though for a long time she only spoke in whispers.

Eventually she recovered, and was discharged on March 20th, 1889.

There certainly was no real hypnotic state induced in this case, but the attempt at it appears to have acted as a stimulus to the patient, and roused her to some action. The subsequent improvement seems

to have been due to personal attention, and the case is very similar to those of M. H. (No. I.) and E. S. B. (No. VIII.).

CASE XVIII.—F. C., governess, æt. 51, admitted December 4th, 1888. Mother had “softening of the brain.” History of alcoholism and morphia habit. Had been in a home for the cure of this for a year before admission. Persistent hallucinations of hearing, inducing attempts at suicide to escape persecution.

December 4th, 1889.—Attempt at hypnotism by Mr G. A. Smith for nearly an hour. No effect whatever, though patient was quiet, and seemed to give her attention.

December 6th.—Another attempt. No result.

CASE XIX.—J. E. D., a nurse, æt. 25, admitted November 12th, 1889, suffering from melancholia, following an attack of diphtheria. No neurotic inheritance. Hallucinations of hearing and refusal of food the most prominent symptoms.

December 6th.—Attempt at hypnotism by Mr. G. A. Smith for over half-an-hour. No result.

December 7th.—Another attempt. No result.

No further attempt.

CASE XX.—A. P., single, æt. 53. Insane inheritance. Admitted July 13th, 1887, with an attack of resistive melancholia. For a time very ill, then subsequently, and now, quiet and reasonable, but with persistent hallucinations of hearing remaining as a residuum. The voices are always heard overhead, and repeat her thoughts, and are associated with a gnawing sensation in the vertex.

December 7th.—Attempt at hypnotism by Mr. G. A. Smith. Though persisted in for a considerable time, and though patient remained quiet, she was not hypnotized.

No further attempt.

CASE XXI.—J. H. G., single, æt. 25, admitted November 8th, 1889. Mother had “hysterical fits” when pregnant with patient, and had delusions for a week. Said to have had exophthalmic goitre twelve years ago, but no sign of it on admission beyond slight prominence of eyes. Five years ago apparently had hysterical paraplegia, and was sent by her friends to stay in the house of a female “mesmerist.” There she rapidly recovered from the paraplegia, and remained well till May, 1889. Then she said she felt she should have a “fit” like her mother, became sleepless and obstinate, and was sent away with a nurse. Not improving, she was sent a voyage to America, and was away six weeks. While away lost self-respect, became excited, and was found masturbating. On the voyage home she had to be forcibly restrained. On admission she had hallucinations of sight and hearing, was excited, dirty in habits, erotic, said she was married, and was “the woman taken in adultery.” She was found to masturbate constantly and openly, being utterly devoid of shame or sense of decency.

The patient had previously been seen by Dr. Lloyd Tuckey, who

thought she was susceptible to hypnotism, and perhaps "a suitable subject for suggestive treatment." Her friends were also willing and anxious that hypnotism should be given a trial. It was decided to make daily experiments at first.

November 19th.—At 2.50 p.m. Mr. G. A. Smith tried to hypnotize her. In five minutes she was asleep. It was suggested to her that she should sleep till supper time, and that she should be clean in her room at night. She was left at 3.50. She woke at five p.m., and remembered nothing of what had been going on.

November 20th.—Was as dirty as ever in her room last night. To-day was hypnotized more quickly. Just before going off had tremor of the eyelids and turning up of eyeballs. She was insensible to a smart pinch, conjunctival reflex nearly gone, and slight stiffness of arm was produced. Suggestion of a trifling act to be done on waking was not followed. Suggestions as to conduct were repeated.

November 21st.—No impression last night. Again hypnotized to-day at 3.30. Suggestion to do a trifling act on waking not acted upon. No suggestion as to conduct made.

November 22nd.—Hypnotized in bed, and told to sleep till eight p.m. Did not open her eyes till then, but talked and laughed as she does when awake.

November 25th.—No cleaner in habits yet, and no improvement in general condition. Hypnotized at 4.20 ; told to sleep till eight p.m. At 7.30 woke up and hammered at the door of her room, and asked to be allowed to go to the lavatory. She had never done this before, generally preferring to pass her motions in bed.

November 29th.—Two attempts at hypnotism since the last note, but both were complete failures. She continued to repeat Mr. Smith's suggestions, but said she would not do them, laughed, and sang. After an attempt of three-quarters-of-an-hour duration it was abandoned.

December 3rd.—Apparently hypnotized to-day, and told to sleep till eight o'clock, but fifteen minutes after Mr. Smith left she had opened her eyes and was running about the room.

December 4th.—Another attempt, followed by failure. Condition of patient and habits as bad as ever. She had only been clean on the nights of November 25th and 26th.

Further attempts were abandoned, and other methods of treatment tried, but up to the present there has been no improvement.

In this case great results were at first hoped for, as she certainly was hypnotized, but she appeared to resist the process more and more, and the case must, we fear, be looked upon as a complete failure as far as that method of treatment is concerned.

The results may be summarized as being attended with very little success as far as the production of the hypnotic state was concerned, and the same remark applies to any therapeutical good to the patients.



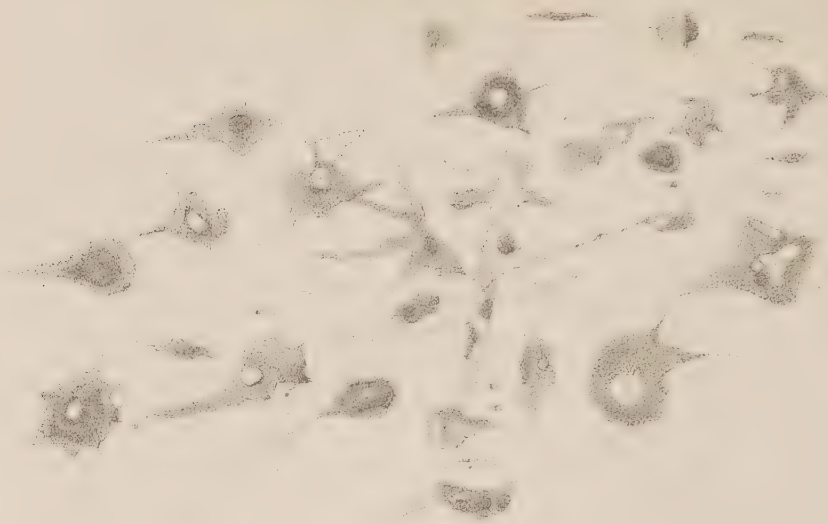


Fig. 1.

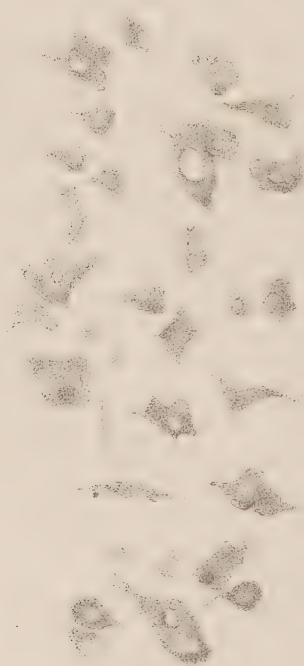


Fig. 3.

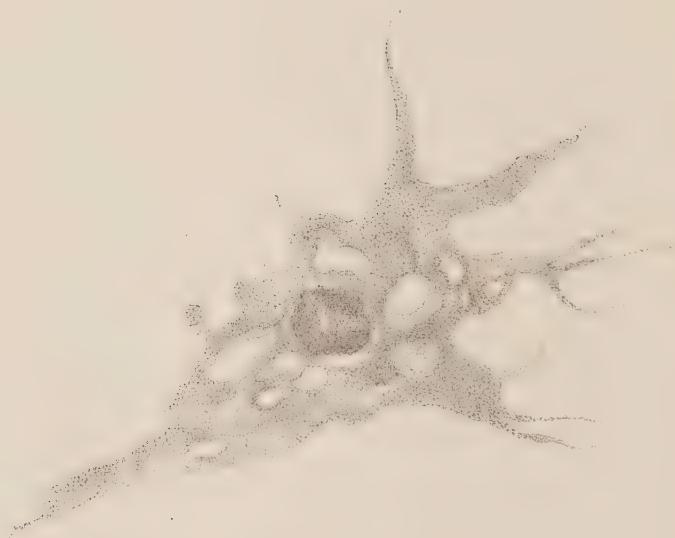


Fig. 2.

The patients who appeared to derive some benefit were cases I., VI., VIII., and XVII. Cases I., VIII., and XVII. were very similar in symptoms, in all three refusal of food being the greatest difficulty to combat, and in all there certainly was some improvement in this respect after the attempts at hypnotism, but the results gained would appear to have been due much more to the large amount of personal attention devoted to each case than to any hypnotic influence. Case VI. was not in a condition of stupor as were the other three, and if suggestion had any effect, it was suggestion without hypnotism.

Cases XI. and XXI. were certainly hypnotized. In case XI. further experiment was prevented by her removal from the hospital, but the suggestion made in the very light hypnotic state induced was not acted upon.

Case XXI. promised well at first, but further experiment failed. Suggestions seemed at first to be in a very small degree successful, but instead of the effect increasing it rather rapidly diminished.

We do not pretend that these failures dispose of the question as to the possibility of treating the insane in England by hypnotic suggestion. The cases are merely narrated as evidence of an honest attempt to make a trial in an English hospital for lunatics of a method of treatment which is said to have been successful abroad. Whether English patients can be hypnotized as easily as those of other races is a question. The amount of time and care spent in these cases has been very considerable, and so far the results are not encouraging for further attempts at present. It would be a matter of satisfaction to know whether other English observers have arrived at similar or other results, but at present we know of no report of such cases. We hope that hypnotism will be given a fair trial in other hospitals and asylums in England, and that others may meet with more success than we have done.

CLINICAL NOTES AND CASES.

The Morbid Histology of a Case of Syphilitic Epileptic Idiocy.
By F. ST. JOHN BULLEN, Pathologist to the West Riding
Asylum, Wakefield. (With plate.)

Dr. Judson S. Bury has narrated several interesting cases illustrative of the influence of syphilis upon the production of idiocy, with important comments ("Brain," April, 1883), and to his quoted instances I venture to append another.

It is unfortunate, however, that a family history was unobtainable, inasmuch as other factors, such as intemperance, epilepsy, etc., could not be excluded, thus limiting the causal agency to syphilis. Nevertheless, taking into account the actual evidence of the disease in the brain and the gross constitutional infection, that it was the most potent, even if not the sole, originating influence, is probable.

From the conditions revealed by the microscope in the examination of the cortex cerebri, there is but little doubt that the defect of mind was congenital; the impress of this was on the brain-cells at their birth, independent of any subsequent evil effect through endoarteritis, meningitis, or sclerosis.

The histological features in this case are in some respects especially interesting as exemplifying the condition of nerve-cell and nucleus vacuolation found in connection with epilepsy. This constant pathological substratum of the disease, which has been discovered by Dr. Bevan Lewis and fully described by him in his "Text Book of Mental Disease," I, through his kindness, have had the great advantage of recognizing for the past three years, and during that period have had sufficient opportunity, not only to corroborate the truth of the morbid appearances described, but to appreciate the important deductions made by him in connection with them.

The subject is so fully dealt with by Dr. Lewis, that in virtue of the similarity of the changes found in the present case, I have not chronicled the characteristic appearances so much in detail as they admit of. Moreover, as the lesion is not a rare nor isolated one, but on the contrary to be seen of all observers, there is no need to do more than direct attention to its main features. The changes in the cortex in this case are not more marked than usual, and indeed, by no means as pronounced as at times manifested.

As this paper is going to press, I see that a more recent observer, Dr. J. R. Whitwell, has made investigation into "nuclear vacuolation in nerve-cells." His original article ("Brain," January No., 1890) will be of interest when viewed as confirmatory of the account given of the lesion by Dr. Bevan Lewis, who has also divined the true pathological significance of the morbid change.

G. P. Admitted August, 1885, into Wakefield Asylum. Died February, 1889, æt. 16 years.

No information was obtainable, except that convulsive seizures

commenced about the age of three years, and that a brother is believed to be an idiot.

The boy was an idiot of very low type; quite unable to utter any articulate sound, and almost completely devoid of intelligence. He would manifest signs of pleasure when taken notice of, but understood nothing spoken to him; when handled in the course of examination, struck passionately about him and screamed. The mere sensations of vision and hearing appeared unimpaired, pictures and coloured objects evoked manifestations of delight, although obviously conveying no meaning to him.

The physical features were, briefly, these: Light hair and blue eyes. The right cornea almost universally opaque through interstitial keratitis, most dense in the centre, so that the pupil behind could not be seen; apparently anterior synechiæ were present. Vision, seemingly, quite lost in this eye. The left pupil fully dilated.

The cranial contour not especially noticeable. *On the left side of the forehead, a remarkable oval depression of the brain-case, about one-and-a-half inches by a quarter to three-quarter inches, the long axis upwards and outwards; the depth at centre, a quarter inch; margins sharply defined, floor shelving from frontal bone above. At the external inferior angle an aperture existed, filled with pus, fluctuating synchronously with the heart pulsations, and during sleep, with the respirations only. A depression of similar form, but of less extent, was placed at the vertex of cranium, just in front of the inter-auricular line and a little to the left of the median suture. This depression had a hard, firm floor, and no discharging sinus was present.*

The bridge of nose was not sunken. Teeth exceedingly crowded, irregular, and carious, many pegged and notched, especially the upper incisors, in the most typical manner; those of the lower jaw, though crowded, were not irregular. The gums spongy, and bleeding on the slightest pressure; palate unduly arched; lips thick and everted. Skin, generally, over body of a peculiar coppery hue.

Fingers long and slender; those of left hand usually were flexed on the palm, and the hand on the wrist, the condition appearing one of clasp-knife rigidity. Voluntary overcome of the latter was only most slightly possible; when the fingers were extended forcibly they became locked in that position until somewhat bent, when flexion into the palm again occurred. The same condition existed to a small extent at the elbow.

The right arm and hand were used almost entirely for feeding himself, etc. Both upper extremities equally nourished. Erect posture or locomotion were impossible, as the right lower limb was paralyzed and the seat of contractures; the leg flexed on thigh, and thigh upon abdomen, extension only to be performed to a very slight extent. Marked amyotrophy in right limb as compared with left existed. Movements in the latter free, but voluntary actions very

disorderly, and muscles most feeble. Plantar and patellar reflexes, normal; the superficial not obtained. Cutaneous sensibility everywhere unimpaired. Cicatrices from burns (?) on throat and thigh.

Fits occurred about three or four times a week, for the first year. All the limbs were convulsed, and strongly so. On one occasion it was noted that blood oozed out of the frontal depression during a fit. During the next twelvemonths the seizures increased in frequency from one to three or four in the twenty-four hours, and so remained, excepting for a period of two days, on each of which six occurred, only arrested finally by chloral. Both lower limbs at last contracted. On several occasions sustained fractures of clavicle, humerus, and lower part of femur; the bones being so extremely brittle that it became necessary never to move him from one bed to another. Grew very feeble and emaciated. Always negligent in habits.

Autopsy.—Trunk appearances: Much emaciation. Contractures of lower extremities and left upper, as depicted in illustration. Moderate left lateral spinal curvature. Old united fractures in left humerus, right ulna (two), upper end of left femur, and false joint at middle of right femur. Several nodes on humeri and femora, also on front of left tibia.

No especial appearances in trunk-viscera.

Cranium.—The skull presents over about the middle of the orbital ridge of the left frontal bone an irregular aperture, about one-and-a-quarter inches long by one-third to half-an-inch wide; the long axis directed upwards and outwards. The edges of this are jagged and bevelled from without inwards, and there is some deposit of new bone at its margins. To the latter, the underlying dura is adherent. There is another area on the left side, about half-an-inch from the sagittal suture, its posterior edge lying about two inches from the coronal suture, its anterior, three-quarters of an inch; of ovoid shape, occupied almost entirely by new hard osseous tissue, conjoined by serrated margin to a peripheral ring of older bone, the latter itself affixed to the main mass of the parietal bone by irregular dentations.

The dura mater forming the floor of the aperture in the frontal bone is much thickened by dense white fibrous bands, and roughened; it is stretched tightly across the opening, making a pretty firm and resistant occluding lamina. The superior longitudinal sinus is empty and of narrow calibre.

The soft membranes are thickened by exudation, except over occipital regions, and in parts are areas of dense opacity so caused, and there is some slight clouding along the course of most of the vessels in the fronto-parietal regions. The basal vessels are of ordinary arrangement, but much thickened and showing patchy dense opacity, which in the left-middle and both anterior cerebrals becomes pretty general, or in lengthy segments.

The pia covering in the *lamina perforata antica* is raised up by a large ovoid swelling, the size of a big walnut, and formed by the in-

fundibulum, which is distended by the evident great excess of ventricular fluid into a sac with delicate grey membranous walls and tense fluid contents. By this swelling the optic commissure is far pushed out from the base of the brain.

Previous to stripping the membranes, the brain weighs 1,355 grammes, is somewhat wasted-looking, and wanting firmness. On tapping the fluid swelling at the base, serous liquid to the amount of fourteen ounces escapes, and the organ becomes flattened and sunken at vertex and very pulpy. The internal membranes, corresponding to the site of aperture in the frontal bone, are slightly adherent to the dura, but are not torn on removal from it. Here, also, they are thickened more than elsewhere, and have a rough, hard feeling, almost as if a thin plate of bone lay beneath. No attempt at separation from the brain-cortex in this region is made, for fear of spoiling future microscopic observations. Over certain parts of the vertex, viz.: posterior ends of second and third frontal and summits of central gyri, on the right side, and the latter position on the left, stripping the membranes leaves well-marked erosions of the cortex, the superficial layer of which, in small portions, is occasionally firmly incorporated with them. These lacerations are confined to the summits of the gyri, and resemble those found in general paralysis, though not, for the most part, so deep. No tubercular deposits appear in the pia when microscopically examined, nor do the capillaries show evidence of disease in, or morbid products around their coats.

The frontal lobes do not present any obviously notable contour; both are, however, composed of very coarse and symmetrically-running convolutions; decidedly below average complexity. The insular gyri are, too, very simple; the left shows the three hinder digitations fused into one large fan-shaped mass, with furrowings indicative of the normal divisions.

On the right side the entire angular gyrus, with the adjoining (only) portion of the supra-marginal and hinder end of the first temporo-sphenoidal convolutions, is wasted, shrivelled, and sclerosed. No pulpy condition exists, either superficially or deeply. The cortex is of somewhat yellowish hue, and the diseased gyrus passes quickly, but not abruptly, into its continuing convolutions. On slicing across the angular no very noticeable macroscopic change is obvious, beyond extreme thinning of the cortex and narrowing of the medullary core. At the root of the latter there is certainly an excessive number of very coarse puncta, but these exist throughout the occipital region of this (and the left) side, together with an increase in the generally-lesened consistence of the white substance, although in no way approaching to actual ramollissement. The medullary substance between the cortex and ventricles is everywhere much thinned by the great distension of the latter. The corpus callosum is so diminished in thickness and consistence that it tears under the most gentle manipulation of the brain, as does, also, the soft pulpy medullated lamina representing the fornix.

The basal ganglia are seen much flattened out. In both corpora striata an oval-shaped area of depression exists on the ventricular aspect at the junction of the head and tail. A division of the substance at one of these sites shows lessened consistence and dusky coloration of the brain matter by numerous very coarse vessels.

The whole of the right cornu ammonis is of extreme gristly hardness and toughness; the left cornu is only slightly increased in firmness.

The optic nerves are firm and of normal contour; their transverse section 3×4 mm. The right shows an apparent inner dark area, denoting some degeneration. There is no coarse appearance of disease in the optic tracts, as indicated by discoloration or wasting, and the quadrigeminal bodies seem in no way affected.

The ependyma of lateral and fourth ventricles is very granular. The depth of cortex in the following regions is: Left asc. frontal, 3.75 mm.; right asc. frontal, 3 mm.; right angular, 1.5 mm.; left frontal (beneath aperture in bone), 1.75 mm.

Motor Region.—In certain portions of this the field shows an unusually sparse distribution of stained elements, both neurine and interneurine; as regards the former, not taking into account those cells unchanged or partly destroyed only, but including all apparent, in any stage.

A very striking number of the pyriform cells of the third stratum present well-marked vacuolation, both of nucleus and protoplasm. Of the two the former is the most frequent site by far. In this, all stages of the diseased process are seen, from the appearance of a tiny, brilliant speck in the nucleus to the almost complete disappearance of the same, a narrow, deep-stained ring, representing the circumferential part, alone remaining—or its entire absence, a mere hollow shell of protoplasm being left.

Vacuolation of the protoplasmic investment is especially well seen in the cells of the ganglionic formation. Occasionally several large vacuoles surround the nucleus, which appears, as it were, supported on the remaining filaments of protoplasm, like a stone in the claw-setting of a ring. According to the position of these, the nucleus is displaced, entire, to one or other side or corner of the cell, or is broken up, or, again, maintains its usual site. Most of the ganglionic bodies show far advanced disease; some are obtusely rounded, swollen, granular, and have imbibed the aniline dye until the protoplasm is hardly differentiable from the nucleus. Some, on the reverse, are so faintly stained that they seem scarcely demarcable from the intercellular tissue. Either of these kinds may have a highly-stained and, perhaps, unusually large nucleus, or the latter may seem absent. Large pigmentary accumulation exists in others, causing marked bulging of the cell, and in more than one instance rupture at this point has occurred, and a mass of pigment lies partly or wholly discharged, in the latter case leaving a hollowed-out cell, with or without

one or more clearly-defined vacuoles. Others in this region are quite spherical, with stunted processes, the basal often alone remaining.

In the nucleus of these large cells vacuolation commences, frequently in three, four or five places, and proceeds until nothing but a circular rim remains, or the nucleus breaks up into segments. There are, besides the foregoing morbid changes, a large proportion of cells in the third stratum, which are altered in one way or another; being, perhaps, globose, or irregularly bulged with pigment, and often extremely pale and ragged-looking, the nucleus much atrophied, or even not apparent. The protoplasmic extensions of these cells are not only very feebly stained, but short, rough, and often broken off.

The second and claustral strata have not escaped. In the first, vacuolation is frequent, and a good proportion of the nerve elements are in various morbid conditions, up to that preceding removal; in the last, vacuolation is a prominent feature in the nucleus, and is the most noteworthy one. There is some difference in the character and amount of the degeneration found in parts of the motor area. The immediately-preceding changes have been described from sections taken from the five-laminated cortex at the summit of the left ascending frontal gyrus. Sections procured from the corresponding locality on the right side show uniformity in kind, but less intensity. Those from the summits of both ascending parietals present vacuolation comparatively quite seldom, and morbid changes, altogether, are not very obvious. The pyriform cells of the third layer, and especially the deeply-placed ones, are thickly studded with nucleated cells, whilst capillary vessels, or lines of cells indicating their course, are numerous. On the other hand, the first-described changes are not associated with any perceptibly-increased vascularity; indeed, rather the reverse obtains.

Antero-frontal Region.—Sections carried through those portions of the first and second frontal gyri subjacent to the aperture in the frontal bone show the normal structure, both grey and white, of the second frontal to be obliterated as to its histological features, the tissue substituted extending across the intervening sulcus into the core of medulla of the superior frontal. The pia is firmly welded to the cerebral cortex through the extremely coarse belt of neuroglia in the first stratum, nearly all of which last is somewhat darkened by the increase of connective. The histological characters of the replacing tissue are not everywhere similar. The portions entrenching upon the claustral layer of the first frontal gyrus present a dense overgrowth and hyperplasia of connective-tissue corpuscles, but no discoverable cell accumulation in the meshes formed by their ramifications. Yet more towards the medullary core angular and rounded cells are seen fairly closely arranged in these spaces, and amongst which run many capillary vessels. Some of these are nervous elements. Elsewhere found, and passing up to the cortical surface of the second frontal gyrus, where it blends with the peripheral belt of neuroglia, is densely

fibrillated connective tissue, running in thick sheave-like bundles, and totally eclipsing every trace of nervous structure; whilst patches of still deeper staining denote the especial aggregation of fibrous tissue around vessels.

Cortex of First Frontal Gyrus.—The arrangement of the stained elements in this region appears somewhat crowded, by reason of the large number of nucleated cells, mapping out the course of capillaries and free in the neuroglia. A general aspect, also, of irregularity is given by the inequality of staining, resulting from the different stages of disease affecting the nerve cells, by, to some extent, morbid variations in their shape, and by the presence of numerous fragmentary remains of the same.

Of the more specialized changes, the most prominent are in the pyriform cells of the third stratum. In great part these are shrunk; in a few number, on the reverse, swollen or globose. In all alike the protoplasmic extensions are badly, or even not seen, and in many instances the cell body is so pale and ill-defined that but for the deep-stained nucleus these elements would hardly appear other than faint circumscribed darkenings of the neuroglia basis. There, is, however, a morbid change which picks out these pyriform cells notably, and, in some degree, is present in a large proportion of them, and that is vacuolation of the nucleus, seen in all stages. It may be stated that where the nerve elements in the third layer do not show this, it is because the nucleus is not to be seen, and may presumably have succumbed; the cells themselves are but faded remnants, evidently in the final stage of decay; the protoplasm appears to have suffered independently of the nucleus, and lastly and seldom, because the cells show no alteration.

The same quality of change exists in the other nerve-cell strata, though not so marked, nor so general.

It has been already mentioned that numerous capillaries are indicated by tracts of nucleated cells, and a great excess in the number of vessels, visible as such, ramify throughout all the cortical laminae. This hypervascularity probably is in connection with the deep-lying connective-tissue overgrowth.

Sites of Meningo-encephalic Adhesion.—Here is found very marked thickening of the peripheral neuroglia, from which, at parts, extends downwards, through almost the whole depth of the first layer, a tolerably dense fibrillation. Elsewhere, in the same regions, active scavenger-elements are present numerously. But with this exception, and the occasional appearance of a very small group of these latter corpuscles amongst the cells of the third stratum in the antero-frontal cortex, no notable increase of connective tissue is found in the cortical laminae. It is indicated that the large ganglionic cells of the motor area are distinctly more degenerated deep to the sites of marked sclerosis in the peripheral zone.

No changes whatever are obvious in the occipital region. The

right angular gyrus throughout its entire depth has its proper structure replaced by an exuberant growth of connective-tissue elements. The affection appears to be a genuine sclerosis.

Cornu Ammonis.—In the stratum of the large pyramids exists an excess in the number of nucleated cells, both pericellular and free in the neuroglia; from this cause the field appears more closely dotted with stained-elements than usual. The former hide not only the outline of the cell, but often its entire mass, packed in grape-like clusters, and lying seriatim along the apex process. These overlain cells, and many of the others, seem of much impaired vitality, are, where in view, pale and poorly stained, the nucleus occasionally vacuolated, the apical process retracted, ill-defined, or unseen, so that, *en masse*, much of the characteristic superincumbent radiation is lost.

The pyramidal cells rapidly thin out below the conjunction of the lamina medullaris externa with the fascia dentata, and disappear for the whole of the inrolling almost, until the hilus fasciæ dentatæ is reached, when a few indistinct cells come again into view. Their vanishing is absolute in some sections; in others a few degenerated elements alone represent.

It is hardly necessary to say that the actions from which the preceding and following descriptions are made were chosen from a site in which the continuance of the pyramidal layer around the fascia dentata is either not at all, or but for a very short distance, interrupted.

In the area bounded by the convolute of the granule layer is seen, under a low objective, a great excess in the number, with considerable distension, of the capillary vessels over those found in the normal state. Various contorted, they traverse the field in all directions; their walls are generally closely sprinkled with branching nucleated cells. More highly amplified, the latter show their pale protoplasmic investment, and the delicate filament which joins them from the lymph-connective cell in the vicinity. At these points the adventitial sheath is, not seldom, pulled-out laterally. The so-called spider cells are in great abundance and plainly seen, even under a low power, their processes ramifying far and wide. Their tentacular extensions can occasionally be perceived attached to nerve cells, which show changes in shape and substance indicating their progressed disorganization. The whole of the lamina medullaris externa of the subiculum cornu ammonis presents a darkening, due to increased connective-tissue formation; and in the stratum reticulare not only general coarseness of the neuroglia exists, but the vessels are thickly overlain and surrounded by connective-cells, forming quite dense clumps, their numerous extensions contributing a closely-fibrillated aspect around.

Much the same description applies to the alveus, and large branching cells lie in the neuroglia layer just outside the stratum

granulosum. As it has been seen that the pyramidal cells have almost vanished, and their site is only represented by an abnormally dense and deeply-stained band, it would appear that some degree of sclerosis has taken place pretty generally throughout the ammonshorn. Further, a thick and close belt of neuroglia forms the boundary on the ventricular aspect. In the perfectly fresh state (immediately after cutting on the ether-freezing microtome, and before staining even) this zone was crowded with colloid bodies, which are, however, but faintly visible now. There are yet other changes in the gyrus hippocampi to be noticed, and these are:—The very obvious affection of the cells constituting the clump-formations of the subiculum, by vacuolation, mostly nuclear; and the remarkable prevalence and high degree of the same morbid appearance amongst the grouped pyramids of the gyrus hippocampi.

Sites of wasting in Corpora Striata.—The position of these has been roughly indicated already; they are approximately opposite to the anterior pillars of the fornix; are exactly symmetrically placed, and nearly as equally apportioned as to area and degree of degeneration. The tissue of the caudate body, on each side, immediately contiguous to the ventricular wall, for about 0.75 c.m. outwards, and extending about 1.5 c.m. vertically, has undergone degeneration. Macroscopically, in place of the compact parenchyma, little more than a framework of connective tissue remains at this site, the neurine substance around being soft and friable. No coarse signs of hæmorrhage or ramollissement appear in the vicinity. Under the microscope is seen the following:—Near the borders of the focus of degeneration there is well-marked moniliform segmentation of the medullated fibres, which proceeds at times almost to isolation of the segmented portions of Schwann's white matter, but, for the most part, a notable varicosity prevails. A cloudy appearance of the tubules is common, and pretty universally, but a certain accompaniment of the segmented medullary masses, nucleated cells, lie along the course of the nerve-fibres. The protoplasmic investment of these cells is often quite plainly seen, even in the hardened sections, whilst infrequently branches are observed spreading out over the medullated tube. These latter cells are present in great number, and especially in the neighbourhood of capillaries are aggregated almost in mass. Here, again, patches of deep-stained, fibrillated connective replace in limited areas the proper nervous tissue. A rather free permeation by vascular channels is apparent, as indicated by linear tracts of nuclei, as well as by the vessel tunics themselves, which present also, frequently, a notably beaded contour. The larger capillary trunks in this region have their muscularis thickened and nuclei over-numerous, and in the largest-sized vessels, where cut transversely, there is a decidedly thickened intima and free proliferation of the nuclei.

As the focus of degeneration is encroached upon, the nerve-tubules

gradually drop out of view, and, partly no doubt owing to the replacement of them by connective-tissue, and in part to the process of preparation, are almost absent. Where seen, they are granular-looking, and have absorbed diffusely the staining-reagent. A mesh-work of fibrous strands remains, dotted with a quantity of nucleated cells, and interspersed with capillaries, granule-masses, etc.

Sections taken through the mesencephalon, pons, medulla, and spinal cord, in various regions, show no recognizable disease in the course of the motor tracts. And, moreover, excepting the following site, no lesion appears in any portion. Only in the vicinity of the sylvian aqueduct is degeneration found; here, at the front, and laterally of the aqueduct, is there much thickening and condensation of the neuroglia, and in the former situation, as far forwards as the oculo-motor nuclei, there is a large number of freely-branching connective-tissue cells. The nerve nuclei and roots seem normal, nor is lesion found in the remaining areas of the section. Both internal capsules are stained by carmine, and after Pal's method, but no degeneration is discovered.

In the lumbar cord, the investing pia is somewhat thickened, congested, and the seat of a considerable cell-exudation around the larger vessels. The anterior nerve-roots are quite healthy-looking.

The optic nerves and chiasma present no morbid change.

Cerebral Tumour involving the Frontal Lobes. By A. HILL GRIFFITH, M.D., Surgeon to the Royal Eye Hospital, Manchester, and T. STEELE SHELDON, M.B.Lond., Cheshire County Asylum, Macclesfield.

Jessie P., aged 23, was a nurse at the Parkside Asylum.

She was a tall, well-developed, handsome girl, with brown hair and irides, and of clear pale complexion. Several members of her family had died of phthisis, and the father was rheumatic, but the patient herself showed no symptoms of tubercle and had not suffered either from rheumatism or from scarlet fever; there was no history and little probability of the acquisition of syphilis, and no injury to the head had been sustained. Menstruation had always been scanty.

She first consulted Dr. Griffith on the 9th December, 1886, but there had been these symptoms preceding: Severe left-sided neuralgia and occipital headache, accompanied with nausea and vomiting, had occurred in paroxysms during several months; occasionally there was nocturnal delirium, and she complained at times of temporary dulness of vision and hearing, especially in the morning; there was some impairment of memory, and she was losing flesh; hysteria seemed to afford sufficient explanation of the symptoms until the development of

a slight convergent squint on the left side attested to a more serious condition ; the interference with vision caused by the squint was such as to induce her to seek the advice of an ophthalmic surgeon, and she accordingly visited Dr. Griffith at the Royal Eye Hospital. She was under his observation at intervals until the 4th September, 1888. The following is an abstract of his notes of the case :—

December 9th, 1886.—Vision equal and normal in each eye ; patient read No. 1 Jäger easily with each eye and at a good range, showing that there was no affection of the accommodation ; pupils equal and active. There was well-marked double optic neuritis, the papillæ being greatly swollen and vascular, and projecting well forwards into the vitreous, but no hæmorrhages were present. The fields of vision, traced on chart, were normal for white, red, and green, and the colour perception was keen. The sense of smell was lost on the right side. Taste and hearing unaffected. No staggering or affection of gait ; tendon reflexes normal. Summary of symptoms :—*Double optic neuritis, paresis of left abducens and right olfactory nerves.*

December 11th, 1886.—Was admitted into the Royal Eye Hospital, and mercurial inunction was started. On the 19th she had an attack of screaming, became unconscious, and was hemiplegic on the left side ; she was discharged on the 25th, some dragging of the left foot alone remaining of the hemiplegia.

A very striking improvement in the general condition of the patient then took place, and at her earnest request she was allowed to resume her duties in the asylum on the 18th May, 1887.

June 11th, 1887.—Visited Dr. Griffith, who notes that she looks in perfect health ; is menstruating more regularly than she ever remembers. Pupils are 4 mm. in diameter and active ; there is still slight convergent squint on the left side. Right eye—vision still 1 Jäger and $\frac{6}{8}$; field with hand-test normal ; left eye—vision has sunk to $\frac{1}{8}$ and the field is much contracted all round. She recognizes colours even with the worse eye. She thinks the left leg is weaker than the other, but this is not evident on examination, and the calf-measurements are equal.

October 15th, 1887.—The vision of the right eye has sunk to 1 Jäger at 9 inches and $\frac{1}{8}$, of the left eye to 16 Jäger. The right disc is obscured at the circumference, and greyish ; the vessels are of fair size, but obscured in places ; left disc very pale grey. Her weight is 137 lbs., as against 122 lbs. six months before ; she looks very well and stout. Vomiting has again come on, especially at night ; her friends notice that she staggers. There is a tingling sensation in her left foot and sometimes in the left hand.

May 8th, 1888.—Right eye—4 Jäger and $\frac{6}{8}$. Left eye—can just see one's hand moving. The neuritis on the right side is almost as well-marked as ever. She looks well and stout. Mercurial inunction again ordered.

June 29th, 1888.—The right eye sees fingers. The left eye has

perception of light only. Hearing unaffected. Taste and smell gone. Has shooting pains in the knees, left ankle, and shoulders.

The patient remained in the asylum until August 1st, 1888, but had for many weeks been unfit for work, owing to the failure of vision, severe headache, giddiness, and, at last, prolonged attacks of screaming, between which she lay with her head buried in the pillow, paying no attention to anything. Her articulation had gradually been assuming a slow, drawling character, and there was evident simplicity of manner.

August 15th, 1888.—Was again admitted into the Eye Hospital, having been confined to bed at home for a fortnight.

Right eye—bare perception of light. Left eye—no perception. Pupils $7\frac{1}{2}$ mm. in diameter and fixed. There is subsiding neuritis and commencing atrophy of the discs. She is deaf with the right ear. Taste and smell quite lost. On the 26th August was seen by Dr. Dreschfeld, who found that the knee-jerk was absent and that there was a sharply defined loss of sensibility on the right side of the body. She left the hospital on the 4th September, 1888, and was not again seen alive by either of the reporters.

The patient remained at home until her death in November, 1889, being occasionally visited by the medical officers of the Macclesfield Infirmary. The mother reports that she was quite maniacal for about a week during the summer, and then settled into a quiet, comparatively contented state, remaining conscious and coherent until almost the end. Extreme giddiness compelled her to keep her bed; ultimately she lost almost absolutely the senses of sight, hearing, smell, and taste; the last sound audible was the loud, heavy strike of a "grandfather's" clock near her bed. Notwithstanding the loss of taste and smell, she preserved a good appetite, expressing preference for such articles of food as chops and steaks. During the last week coma gradually supervened, and one side of the body was convulsed, the other being flaccid. Nutrition was well-maintained. Articulation became more indistinct by degrees. Through the kind co-operation of Dr. Nuttall, of the Macclesfield Infirmary, an examination of the head was obtained 36 hours after death.

Autopsy.—The skull was decidedly thinned, and its inner surface was extremely irregular, sharp bony prominences being noticed here and there. The dura mater was more than usually adherent to the vault, but was otherwise of healthy appearance. The gyri of the convexity were flattened; the pia-arachnoid was thin and transparent, and the superficial veins were full. On raising the tips of the frontal lobes, there was discovered the anterior edge of a large tumour occupying both anterior fossæ, and adhering to the brain; in raising the tumour to reach the optic nerves, a short fragile attachment to the dura mater was broken through at a point about $\frac{1}{4}$ inch in front and to the right of the entrance into the orbit of the right optic nerve; the brain was then removed with the tumour adhering. The dura

was not unusually adherent to the roof of the orbit, and on stripping it, the bone underneath the area of attachment of the growth was found to be closely pitted, as if it had been penetrated by rootlets of the growth or dura. Viewed from below, the tumour had a rough resemblance in shape and size to a second cerebellum, thrust into and between the frontal lobes; a longitudinal groove, corresponding with the crista galli, divided it into two hemispheres, each of which occupied almost the whole of the orbital aspect of the overlying frontal lobe, whose interior white matter it had largely excavated. The growth was easily shelled out, when the left hemisphere was found to be the larger; on this side the excavation just reached, without involving, the anterior limit of the corpus striatum. There was no circumjacent inflammatory softening or œdema, and no evident atrophy of the convolutions of the convexity. Considerable direct pressure must have been exerted on the olfactory and optic nerves. The growth was invested by a smooth fibrous capsule, over which ran several large vessels; on section, it was pinkish-grey in colour, mottled and vascular, and of the consistence of an average kidney. Histologically, it proved to be a sarcoma which has been variously named—endothelioma (Ziegler), nested sarcoma (Gowers); for its appearance, reference should be made to the plate appended to the report of a case by Dr. McDowall in Vol. xxx. of this Journal. Moreover, the whole of the post-mortem appearances there described so closely resemble those of the present case that when the reporters brought it under the notice of the Manchester Clinical Society, Dr. McDowall's drawing was exhibited as fairly representing the state of things found by them; in their case, however, the tumour seems to have been larger.

Remarks.—No hypothesis as to the position of the growth was formed during the life of the patient, and, so far as we can gather from the literature at our disposal, diagnosis seems to be very commonly at fault when the pre-frontal lobes are concerned. It would appear that not infrequently the presence of a tumour is unsuspected until the autopsy, and that the symptoms have been regarded either as those of simple insanity, or have led to a diagnosis of paralytic dementia or general paralysis of the insane. Dr. McDowall's case already referred to is in point, and we ourselves have notes of a case in which the defective articulation, dementia, general motor weakness, and epileptiform seizures gave rise to the mistaken diagnosis of general paralysis, the autopsy revealing a sarcoma at the base embedded in the left pre-frontal lobe; the use of the ophthalmoscope in both these cases would, no doubt, have revealed their true nature. The variability of the symptoms manifested by tumours in this region is well illustrated by a comparison between the cases just mentioned and that of Jessie P.; what

a different clinical picture with an almost identical lesion is that presented by McDowall's case! In it, the stress fell mainly on the mental side, whilst in our case, perhaps the most remarkable and unexpected feature, considering the degree of involvement of the pre-frontals, was the absence of any marked mental change; at the most, it amounted to some childishness. A more striking contrast still is afforded by the unpublished case above-mentioned, in which with a much smaller focus of disease, dementia was the leading symptom, extending in time over nearly two years. In Ross's work on the Diseases of the Nervous System, there is the following interesting passage:—"Pathological observation bears out the idea that disease of the cortex of the orbital surface produces much less mental disturbance than disease of the superior convex surface of the pre-frontal area. And this is only what might be expected if the former is developed at a later period than the latter. The convolutions of the orbital surface would then represent the later acquired cognitions and emotions, and abolition of them would cause less mental disturbance than abolition of those which are earlier acquired but more fundamental." This may be applied to the case of Jessie P., in whom the convolutions of the convexity of the lobe and the immediately underlying white matter were unaffected save by pressure; as regards the other cases, to which the quotation seems not to apply, it occurs to us to suggest that following on the destruction of the orbital gyri, serious nutritional changes may have occurred in the remaining convolutions sufficient to lead to a diminution or abolition of function. Thus, in the reference-case under our own observation, there was such an amount of local œdema as to give a straw-coloured, gelatinous appearance to the left frontal lobe which was thereby much increased in volume, the mesial surface of the right lobe being rendered strongly concave by the projection of its fellow.

It remains to mention two or three interesting points in Jessie P.'s case: The loss of hearing and the marked vertigo are perhaps sufficiently explained as a result of intra-cranial pressure; it will be remembered that there is communication between the arachnoid cavity and the labyrinth by means of the aqueduct of the cochlea. The anosmia, no doubt, was due to the direct pressure exerted by the growth on the olfactory tracts, and, as an aid to localization, the symptom should have been more critically considered. The optic neuritis presented no unusual features, but from the position of the growth, tem-

poral hemi-anopsia might have been expected to be present; such, however, was certainly not the case. The observation was made of loss of the knee-jerks. This has been once previously noted by one of us in a case of cerebral tumour; the symptom forms the subject of an interesting paper by Dr. Stephen Mackenzie in Vol. vi. of "Brain." Lastly, the situation of the growth deserves notice; Gowers draws attention to the proclivity shown by tumours at the base of the brain for the neighbourhood of the anterior clinoid process and the petrous bone; in both McDowall's case and our own, the former was the site of election, and one of us has, in asylum practice, met thrice with growths similarly placed. A practical point is that in this situation they can be reached by the surgeon, but are we at present in a position to avail ourselves of his assistance? Hitherto, so far as we know, Professor Durante's case [*Lancet*, Oct. 1st, 1887], is the only one in which diagnosis has been followed by successful operative measures.

Case of Peripheral (Alcoholic) Neuritis, under the care of Dr. T. W. McDOWALL, reported by JOHN CLARKE FENWICK, late Clinical Clerk, Northumberland County Asylum.

Kate H., aged 42, married, the mother of one child, a barmaid in her younger days, was admitted into the Northumberland County Asylum on October 10th, 1889, suffering from delusions, loss of memory, and paralysis of the upper and lower limbs.

History.—She has a well-marked neurotic history. Her father had chorea when a young man. She has an idiot brother and a maternal cousin deaf and dumb. Her son, aged fifteen years, has chorea.

Present illness.—Her illness dates back some two years, about which time—indulging freely in stimulants—she had frequent attacks of headache. She now developed "rheumatism" (?) in her right leg, which was followed some months later by "pins and needles" in the ankles and knees and about the calves of the legs. At this time she had pains whenever she attempted movement in either the knees or ankles, more pronounced in the right leg. She now began to experience difficulty in walking, she "could not trust her legs," combined with which there was pain on movement, and a feeling of heaviness about the lower limbs, which slowly increased until she was compelled to take to her bed.

She now noticed that she was losing power in her hands; used to drop things, and was unable to carry a cup to her mouth, owing not only to loss of power, but also to irregular movements. She is described at this time as being exceedingly irritable and bad tempered, and partaking freely of alcoholic stimulants.



TO ILLUSTRATE CASE OF PERIPHERAL NEURITIS.



Present condition. Nervous system.—She has marked numbness and tenderness in the lower limbs. The soles of the feet are exquisitely tender; there are shooting pains down the legs, and marked atrophy of the tibialis anticus, extensor communis digitorum, and the extensor proprius pollicis. She has a typical Drummond's ankle-drop. There is but little power in either the muscles of the calf or those of the front of the thigh. She has a decided objection even to gentle pressure of the calves, the muscles being exceedingly tender to the touch. There is well-marked hyperæsthesia in patches over the lower limbs, and spots of hyperalgesia and analgesia here and there. There is impaired sensibility on the outer side of both legs, with occasional patches of anæsthesia. Retarded sensibility is exceedingly well demonstrated. The thermal sense is apparently normal. She has something akin to a "girdle sensation" round the calves. There is no vesical or rectal sphincter paralysis. There is no plantar reflex, but the foot is withdrawn with all possible speed owing to the exquisite tenderness of the sole.

The knee jerk is gone. She lies with the knees flexed and the ankles extended. With her eyes shut she is quite unable to tell the position of her legs, and she cannot place the right or left heel upon the opposite great toe. In the upper extremities the numbness, paralysis, and ataxy are so marked that she is totally unable to do anything for herself. On being asked to place either index-finger upon the tip of the nose with the eyes shut, her attempt is wide of the mark. The fingers are flexed into the palm, and to the ulnar side. There is atrophy of the muscles of the arms, forearms, and hands—more pronounced on the dorsal aspect of the forearm.

There is almost complete paralysis of the supinator longus of both sides. Here and there are patches of hyperalgesia and of analgesia in the forearms and hands, and the muscles are painful on pressure. Numbness and tingling are very pronounced in the hands, especially on the palmar aspect of the fingers. On testing the wasted muscles with the interrupted current, there was noticed a loss of a faradic irritability, with the continuous current a slight increase of galvanic irritability, but the muscles were slow in responding to either form of current. There is a slight inequality of the pupils, the left being the larger of the two. They react but slowly to light, but are fairly active to distance.

Alimentary system.—The tongue is moist, furred, and tremulous. The breath is fœtid. Lips dry and cracked. Teeth fairly good, but dirty; gums slightly spongy. The appetite is only moderate. Deglutition easy. Slight thirst. There are no gastric sensations—pain, weight, heartburn, distension, nausea—complained of. She has sometimes flatulence, but no acidity, eructation, or water-brash. On one or two occasions she has had diarrhœa, but ordinarily the bowels are moved every 48 hours, and the character of the motions healthy.

Abdomen.—There is nothing in this region calling for notice.

Hæmopoietic system.—There is nothing of moment about the lymphatic vessels or glands, except that the glandulæ concatenatæ on the right side are slightly enlarged. The thyroid is apparently normal. Splenic dulness normal. Microscopic examination of the blood presents nothing abnormal; rouleaux are well formed. The colour of the blood as estimated by the hæmoglobinometer is apparently normal, as also the number and relation of cells to each other.

Circulatory system.—There are no subjective phenomena complained of—pain, palpitation, faintness, or dyspnœa. There are no thrills or abnormal pulsations anywhere apparent. Auscultation of the mitral area shows—first sound dull, and rather soft; second sound sharp. Over the tricuspid area the first sound is apparently normal, the second sharp; over the aortic area the first sound is inaudible, the second is a sharp click; over the pulmonary area first sound dull, pulmonary element of second accentuated. There are no murmurs or friction sounds. Pulse 76, regular, and soft. The arteries, capillaries, and veins are apparently normal.

Respiratory system.—The breathing is thoracic in character, regular, 22 to the minute. No pain, cough, or expectoration. The pharynx is slightly inflamed. The chest is well formed, the movement is good, and measures seventeen inches on both sides. The expansion is equal on the two sides of the chest. There is a slight increase (relative) of vocal fremitus on the right side in front. A good percussion note is elicited all over the chest. On the right side in front the expiration is slightly prolonged and sighing, and there is a slight increase of vocal resonance.

Urinary system.—No pain in loins, bladder, or urethra. Frequency of micturition about normal, and no tenesmus complained of. There is fifty-two ounces of urine passed in the twenty-four hours; it is a pale straw colour, clear, with a slight deposit on standing. The reaction is acid; no albumen, sugar, or bile, with ordinary tests. Microscopically the deposit was found to be squamous and transitional epithelium. Specific gravity of urine, 1,020. The quantity of urea and chlorides was only observed on one occasion; the quantity of urea was $7\frac{9}{13}$ grs. to the ounce; of chlorides, about two grains to the ounce.

Reproductive system.—She has had suppression of menses at intervals, and on these occasions has suffered from bleeding at the nose. She has no intermenstrual discharge, and no complaint is made of any subjective phenomena.

Integumentary system.—Slight acne on the face, probably of alcoholic origin.

Mental condition.—She is generally of a cheerful disposition, but is profoundly suspicious, and lies in a most deliberate manner. She has a delusion that electrical machines are attached to the bed, which at intervals give her shooting pains down the limbs. Her memory is bad. She is very cunning, and tells the most deliberate lies to lead those about her astray. She has occasional outbursts of anger, restlessness, and emotion. She has a craving for whisky. At the last

visit of her husband she slapped his face soundly, and appears to have taken a dislike to him, apparently without cause. At times she is obscene, both in manner and language, and even when on her best behaviour she unconsciously betrays the vulgar eccentricities peculiar to her class.

October 12th, 1889.—She is in bed, and unable to do anything for herself, owing to motor paralysis and ataxy in both arms and legs.

October 14th.—She says machines are applied to her which “pinch” and cause shooting pains down the limbs. Late on this day she had paroxysms of pain in the lower limbs.

October 21st.—She has been restless all night; this morning is craving for whisky.

October 30th.—On this date she asserted she had been in this institution about a week.

November 15th.—She still has a delusion that electricity is applied to her. She is taking food and resting better.

December 15th.—She now takes her food well; she is more settled, and sleeps well at night; she is beginning to use her hands in feeding herself. There is a marked improvement in her behaviour.

December 31st.—Her tongue is now clean and moist; her appetite good; she sleeps well at night, and is cheerful during the day; her behaviour is very much improved. She now has so far regained power and control over her limbs as to feed herself and get out of bed when necessary.

March 4th, 1890.—Since date of last note her mental condition has distinctly improved, and, so far as can be ascertained, her delusions have disappeared. Her bodily health is also better, and her muscular power has markedly increased in all her limbs.

Remarks.—The striking features of the case are the so-called “rheumatic pains” as the affection is slowly advancing; the exquisite pain on handling the muscles, and the extreme tenderness of the soles of the feet; the “pins and needles” sensation; the symmetry of the various phenomena; the abolition of the superficial reflexes; the atrophy and paralysis, marked in the flexors of the foot, producing the almost pathognomic dropped ankle described by Drummond; the loss of faradic irritability; the cunning, suspicious aspect; the loss of memory, and the craving for alcoholic stimulants; with the withdrawal of the alcohol, the slowly-returning motor power, and the undoubted increase in the bulk of the wasted muscles. The treatment has consisted in the absolute prohibition of alcohol, careful feeding, and attention to hygienic conditions. The improvement shows the good which comes, not infrequently, in seemingly hopeless cases of alcoholic neuritis when the poison can be absolutely forbidden.

OCCASIONAL NOTES OF THE QUARTER.

Proposed Hospital for the Insane of London.

In our last number we referred to the proposed Hospital for the Insane of London, and expressed some misgivings in regard to this movement.

The Report of the Committee is now before us, and we cannot honestly say that these misgivings have been removed. Much of the evidence given is of a purely speculative character as to what might be the therapeutic advantages and the ultimate saving to the ratepayers in consequence of carrying out this scheme. It is true that in some instances many decided opinions are expressed, but they do not appear to be based on sufficient evidence. For example, it was anticipated by one witness that the result of a hospital of this description would increase the proportion of recoveries by 10 per cent. We are sorry that we are unable to find any sufficient ground for expecting so happy an effect from the scientific study and treatment now proposed, and alleged to be absent from existing asylums for the insane. Another witness observed that if a case of chronic insanity is discharged from a general or special hospital, that, as it is unsuited for Bethlem and therefore sent to one of the county asylums, "it is completely lost sight of." Such a case would be sent to the intermediate hospital now proposed, and it is alleged that it would lead to a saving to the community. We think this is highly improbable. As a matter of fact, cases of a very unfavourable character discharged from Bethlem Hospital in consequence of the rules limiting the period of treatment to twelve months, have sometimes recovered after their removal to county asylums.

Some of the observations contained in the Report itself invite criticism. The disquisition on the nature of insanity and on the phrase "diseases of the mind," seems to us to be out of date, as well as out of place. It is much to be regretted that such an extraordinary mis-statement as the following should go forth to the public:—"In considering insanity with reference to preventive or curative treatment, these material changes (those affecting the brain) are all that need be taken into account." The position here taken indicates but too clearly the crude and one-sided view which the Report takes

of the kind of treatment which the insane require. Moral means, and the mental influence of the environment, appear to be overlooked, and "the physics of the animal body" are made the chief consideration. The experienced Superintendent of Prestwich Asylum, Mr. Ley, made just the sensible observations in his written communication to the Committee, which might be expected from him :—

"I do not think that the establishment of such a hospital in London would in any way meet the requirements of the case. Every advantage claimed from such an institution might be more effectively and economically provided by suitable structural additions to existing asylums, supplemented by a sufficiently numerous medical staff, specially selected with a view to pathological and other scientific investigations."

In this single sentence is contained more practical wisdom than in the florid passages in which the Report abounds. The *animus*, and what we must regard as the special pleading of the Report now under consideration, are exhibited in a passage aimed specially at asylum superintendents. "Our asylums contain thousands of persons who, besides being insane, suffer also from some common malady, such as, if they were not insane, would render them fitting patients for a general hospital. It would be difficult to name a single instance in which any important suggestion for the better treatment of any such common malady has proceeded from an asylum medical officer, although such suggestions are proceeding every day from the medical officers of hospitals" (p. 21).

We are not aware that the visiting physicians to asylums, as, for example, in Ireland, have supplied this alleged deficiency on the part of the medical superintendents.

In another paragraph the unhappy medical superintendent is still more severely handled :—

"In plain truth, he is probably seldom a sufficiently skilled clinical physician to be able to recognize either the existence or the importance of what he might perhaps describe as 'small' departures from health, whether originating in the brain or originating in other organs and affecting the brain secondarily; still less he is likely to have attained the practical skill and experience which would be required in order that such departures should be medically treated in the best possible manner. It is certain he does not recognize that the fact of insanity is itself an evidence of bodily disease, of some error in the nutritive processes, an error which it would be the province of the

physician to search out and correct, by any means of examination or of treatment which he might be able to bring to bear upon it" (p. 20).

Dr. Clifford Allbutt proved to be somewhat of a Balaam, and did not bless to quite the extent that was expected, so that his disrespectful reference to "medicine out of a bottle," from which the Committee of the London County Council expects so much—in short, that the patients' "gloom and despondency will vanish as if by enchantment, and the patient, instead of slowly recovering, will quickly be cured," excited no little "surprise," not to say annoyance.

The following observations must have been particularly unwelcome to the Committee, especially as they did not proceed from a "specialist":—

"I think that the two classes of institutions (hospital and asylum) should be entirely different, especially in their system of organization, and that it is very important that one should get rid of any idea that such an institution as you are contemplating should be anything like the St. George's Hospital or the London Hospital, or such hospitals for the sick in our towns. I find myself, therefore, at issue, partly with your question, and partly with the witnesses, in thinking as I do, that it would not be desirable to have a visiting staff, unless it be for professional purposes only. I found that opinion upon this consideration. The treatment of lunacy does not appear to me—I am open to correction—to be very much a matter of drugs or pharmaceuticals. I do not think that pharmacy will have a very large place in the treatment of the insane. That medicines may be of the utmost possible importance, and that they may be employed at times with the greatest possible advantage, no one of course would deny; but that they are usually of primary importance, or that they are the treatment of mental disease, is, I think, not true. I think the true treatment is chiefly moral and humane, and not very much in the direction of drugs. I, therefore, think that the management of the place—and under management I include all the amenities of the place, as well as the mere stewarding of the house—the personal qualities of the medical superintendent, the personal qualities of every member of the medical and nursing staff, is really *the cure*. . . . It appears to me that all those things which a visiting physician does in a London hospital you would have very little place for. But what it does appear to me that there is a place for, and what is indeed of cardinal importance, is the intimate personal relation between the superintendent

and his staff and the individual patient—the study of the patient's character and peculiarities, the ascertainment of his fears and his delusions, his dreads, his suspicions, what are his hallucinations, and everything of that kind; and then the dealing, as tender-hearted, open-minded, sympathetic, humane people with those mental conditions, as mind with mind. That system, you see, makes your superintendent everything, and, subject to him, makes your staff everything also. The superintendent is your medicine; the staff is your medicine; the nurses are your medicine; your conservatory and your entertainments, your birds, your garden, and your farm are your medicines; and these things cannot be prescribed by visiting physicians" (p. 15).

The only cause for regret is that this witness, apparently in pity for the feelings of his disconcerted questioners, mercifully added before he left the room his sense of the "inestimable blessing" which the Committee had conferred upon the community by pursuing the course which, if adopted, will inevitably be in direct variance with the excellent counsel which Dr. Allbutt had just given. Perhaps it was not unnatural for the Committee to complain that the witness was "scarcely consistent."

In regard to the important question of affording facilities to medical students for the clinical study of mental disorders, these can have opportunities granted them in the existing asylums in and around the Metropolis. At the present moment a large number of students avail themselves of the rich field of study open to them, and there can be no doubt that there will be a large extension of this practice in the future.

Nothing can be further from our wish than to throw the slightest impediment in the way of encouraging, and, indeed, enforcing the clinical study of insanity, and of extending pathological research. To underrate the importance of these two lines of observation would be altogether foreign to our feelings, and the position uniformly taken by the "Journal of Mental Science."

Let our endeavours be directed to the development of clinical teaching in all asylums within reach of medical students.

Let there be a pathologist appointed to every public asylum.

Let the duties of the medical superintendent be lightened as much as possible in regard to the non-medical department, so as to allow more time being devoted to the scientific treatment of the patients; the authority, however, of this officer remaining supreme.

Let there be, wherever it is desirable, a separate block for those patients who are labouring under acute forms of mental disorder. In some instances existing arrangements in regard to a distinct ward for recent cases are amply sufficient.

Let brain-surgery and any and every form of treatment which modern medical science can suggest be tried in existing institutions.

Whether under all these favourable conditions, the percentage of recoveries will be materially raised we cannot say, but this happy result is much more likely to be reached by retaining the moral and social advantages now in operation, the outcome of years of acquaintance with the requirements of the insane, than by the divorce of the moral and physical treatment of mental alienation with which we are now threatened.

Alleged Increase of Insanity.

An important contribution to the study of this problem has been made by Mr. Noel A. Humphreys in a paper read before the Royal Statistical Society, 18th February, 1890. Considering the unfortunate and egregious mistakes which are made in the matter of statistics by those who either are ignorant of the elementary principles of the science, or who draw conclusions from insufficient data, it is of the first importance to have statisticians with special training, and provided with all the particulars which can be procured from dependable sources. These qualifications Mr. Humphreys possesses, and the result is the most trustworthy article to which men can refer who desire to know the real facts of the case.

Mr. Humphreys lays great stress on the shortcomings of the Lunacy Commissioners. It appears that the census of 1881 gave a return of the number of the insane, which was 11,390 in excess of the registered cases reported in the Lunacy Blue Book for that year.

Neither the Local Government Board nor the Lunacy Board makes any return of the admissions of pauper lunatics into Workhouses, or of the new cases receiving out-door relief.

Hence any return of admissions of the insane is defective to this extent. It is also pointed out that the admissions into asylums from among cases already existing in Workhouses, or residing with relatives, are not distinguished from the really new cases.

Mr. Humphreys, of course, disregards as any evidence of the increase of insanity, the rise in the number of registered lunatics from year to year. That this is largely due to more complete registration and the prolongation of life in the lunatic population, admits of proof.

The rate of mortality in asylums declined from 10·31 per cent. in 1859-68, to 10·17 in 1869-78, and to 9·55 in 1879-88.

Praise is bestowed upon the Statistical Committee of the Metropolitan Asylums Board. Their asylums contained 3,208 inmates on January 1st, 1871, and 4,919 at the end of 1888. The death rate steadily declined from 16·63 per cent., in 1871, to 6·85 per cent. in 1886; the mean annual rate declining from 14·1 per cent. in the first three years 1871-73, to 7·40 per cent. in the three years 1886-88. Had the mean death rate in the above-mentioned three years prevailed during the succeeding 15 years, and the number annually resident been maintained, the deaths would have exceeded the recorded number by 3,712. If, again, the death rate in the first three years had continued, and the vacancies due to the excess of this death rate upon the lower rates actually recorded, had not been filled by extra admissions, the inmates at the end of 1888 would have been only 3,346 instead of 4,919 actually in detention, of whom 1,573 survived in consequence of the lower death rate.

From statistics it cannot therefore be inferred that there is any actual increase of occurring insanity.

“In spite of constantly increasing accuracy of registration, the proportion of admissions to population has shown no increase during the last ten years, and actually declined during the five years 1884-88, compared with preceding five-year periods.”

The deficiencies in the Lunacy Board's statistics are especially unfortunate in the following points: (1) The ages of the insane under different kinds of treatment should be tabulated for a series of years. (2) The ages of deaths of the insane persons under such different kind of treatment should also be given for series of years. (3) More precise information should be given concerning the previous history of all the new cases coming under observation during each year. (4) Speaking generally, the tables of the Commissioners should be remodelled so as to include the improved series of tables recently adopted by the Statistical Committee of the Metropolitan Asylums Board.

The conclusion at which Mr. Humphreys arrives must be regarded as highly satisfactory, and calculated to correct the sensational statements current at the present day in regard to

the enormous increase of mental disorders. Up to the year 1878 it was impossible to separate the admission of patients labouring under a first attack from those who had laboured under more than one. And although a return of first attacks is now made to the Lunacy Board, it is a very imperfect approximation to the truth. Still it is better than nothing, and a return of the admissions of first-attack cases from 1878 to 1887 shows that in 1878 the proportion per 10,000 living in England and Wales was 3·337; in 1879 it was 3·345; in 1880 it was less, viz., 3·225; in 1881 slightly higher, 3·252; the same for 1882; in 1883 a distinct rise, 3·435. Now in 1884 the ratio fell to the number of 1878; and it was still lower in 1885, being 3·101; in 1886 it had risen to 3·198, and in 1887 to 3·332. (The last Blue Book does not supply the data for 1888 or 1889.) This ratio is lower than it was in 1878 by a small fraction, and therefore the number of first attacks at the end of ten years (*i.e.*, in 1887) had not increased.

As we have already said, such a return as the foregoing could not be obtained at an earlier date, and as the proportion of admissions of certified lunatics to 10,000 of the estimated population during the 18 years 1859-1876 showed a rise from 4·729 to 5·934, there was some ground for fearing a real increase of occurring insanity.

Now, however, we have not only a return of first attacks which militates against the supposed increase of insanity, but even the proportion of the admissions* to the population shows that no increase has taken place during the last decennium, and that it has even indicated a decline during the latter half of that period. It follows, therefore, that the fears raised by the Lunacy Statistics up to ten years ago do not derive any support from the official returns since that date.

We have always held that it is one thing to disprove the assertion so frequently made that statistics prove the increase of insanity in this country, by showing that statistics do not support this statement, and that it is another thing to assert that outside the range of Registered Lunacy, no actual increase may have taken place under the unfavourable conditions of modern civilization. There may be more nervous excitability, there may be more mental disturbance on the borderland of insanity, but never reaching the portal of a lunatic asylum. It is only proper that this possibility, not to say probability, should be borne in mind. We are bound to warn the present

* Less transfers and re-admissions; workhouses and the Metropolitan District Asylums not being included.

generation against intellectual as well as moral excesses, and we must be careful how we lightly throw away any of the evidence which our own experience affords, tending to support the medical advice which is so much required in this age of rush and worry, whether among men of business or students of science.

Retreats under the Inebriates Acts, 1879, 1888.

We think the time has come when the operation of these Acts and the condition and character of Inebriate Retreats should be reviewed. More than a decade has elapsed since the first Act was passed, and it may be supposed, therefore, that sufficient opportunity has been given for the working of the fresh legislation which Parliament adopted as a consequence of a considerable amount of public feeling, and of the decided action taken by the medical profession. The last (the ninth) report of the Inspector, Dr. Hoffman, is before us, and from this we learn that no new institution of the kind has been opened during the year, but renewed licenses were granted for those already in existence, seven in number, and licensed for 94 patients in all. There were, however, only 49 patients resident in these institutions on December 31st, 1888. The name and situation of the Retreats were as follows:—

Coleman Hill House, near Hales Owen, Worcestershire.

Dalrymple House, Rickmansworth, Hertfordshire.

High Shot House, Twickenham, Middlesex.

Montague House, Brook Green, Hammersmith, W.

Old Park Hall, Walsall, Staffordshire.

Tower House, Westgate-on-Sea, Kent.

Amesbury House, Amesbury, Wiltshire.

Here is the fact that although licensed for 94 persons, there are actually only 49 persons availing themselves of their shelter and care. Why is this? It must be remembered that the Amended Act of 1888 had not borne fruit when these numbers were reported. One of the Clauses in this Act, that which enables the application of a patient for admission to a Retreat to be attested before any two Justices without restriction to the particular jurisdiction for which such Justices usually act, may, and probably will, tend to increase the admission of patients in future. Possibly the change of title from the "Habitual Drunkards Act" to the "Inebriates Act" may render it more popular. It is to be noted that

during the previous year the admissions were only 66, while during the year 1888 they amounted to 99.

It must be admitted that the development of these institutions has been slow, and it would be absurd to suppose that work on so small a scale, however satisfactorily carried on, can be other than totally inadequate to the evil for the alleviation of which it is established. It is true that the statistics contained in this report show that, out of 143 patients under treatment during 1888, 93 were discharged, but we are not informed whether their condition was hopeful or not, and in any case it is only too probable that a considerable proportion would relapse. It is further obvious that supposing all these quondam inebriates remain temperate in their habits, the number bears an infinitesimal proportion to the number of habitual drunkards who continue to practise their unfortunate habits without any reasonable probability that they will ever submit to the care and treatment provided for them in these Retreats. The great difficulty remains that the very individuals who require the restraint and oversight which the Retreats afford will not sign away their liberty of action for a few months.

Mr. Morton, of Edinburgh, late Crown Agent, has, we learn, prepared a Bill for Restorative Homes in Scotland for Drunkards. The object is to make provision for the care and treatment of those who, from morbid temperament or habits and the want of self-control, have yielded to alcoholic or narcotic excess. The Faculty of Physicians, Edinburgh, of which Professor Grainger Stewart is President, and a committee of the Faculty of Surgeons, of which Dr. John Duncan is the President, are cordially working in unison with Mr. Morton, and have prepared memorials to Government, urging legislation on the lines of his draft Bill.

In the memorandum prefixed to the Bill, it is stated that legislation is required which will enable the families of the victims to enforce, for a limited period, the detention of inebriates in establishments for proper care and treatment. At a meeting of the Midland Medical Society, 16th November, 1889, a resolution was unanimously passed in favour of fresh legislation in the direction of compulsory provision for the detention and treatment of well-defined cases of habitual inebriety. Professor Gairdner opened the discussion, and enforced the need for further legislative measures for the more effectual restraint, in the interest of the individual and of the community at large, of habitual drunkards.

At a discussion upon the Bill in the Medico-Chirurgical Society of Edinburgh last year, Dr. Yellowlees strongly objected to such cases being sent to lunatic asylums. He said: "You cannot persuade them to remain long enough to get any real good, and I object to them for the sake of the other patients as well. I say you have no right to impose the company of such liars and mischief-makers upon respectable lunatics. . . . The present modes are miserable failures. Legislation hitherto has been useless, and the Habitual Drunkards Act a complete failure. . . . Mr. Morton's Bill is too good, because it is a great deal more than is attainable. I wish it could be got, but I have no hope whatever that many of its provisions can be carried out. . . . If the Assessment Clauses of the Bill are dropped, then the only practical difference between Mr. Morton's Bill and the Habitual Drunkards Act is the compulsory clause. At present, without that, the Habitual Drunkards Act is useless—sadly useless." Dr. Clouston was equally opposed to the admission of inebriates into asylums, and he therefore refused them, "because he knew he could not do the man the good that was necessary. He thought it was now time that something should be done in this matter."

It will be seen that compulsion is the central idea of this proposed Bill. "If the patient refuses to apply voluntarily, any member of his family or any other near relative, or a friend taking interest in him, or a magistrate in the public interest, may present an application to the Sheriff to grant an order for reception and detention in a District or Private Home; the application to be accompanied by a statutory declaration by the applicant, and if the patient has such friends, by a statutory declaration by two private friends who shall personally have seen him within seven days, also a certificate on soul and conscience by a registered medical practitioner, who shall have seen patient within seven days. If the patient has no friends there must be two medical certificates. The application may be for reception into a home, and for detention for a period not exceeding twelve months."

It would be unsafe to prophesy whether the Legislature will grant the compulsory power now asked. We shall watch the movement in which Mr. Morton is taking so leading a part with much interest. He certainly deserves the thanks of all interested in the work, whether he succeeds fully or not.

PART II.—REVIEWS.

A Text-Book of Mental Diseases, with Special Reference to the Pathological Aspects of Insanity. By W. BEVAN LEWIS, M.R.C.S., Medical Superintendent of the West Riding Asylum, Wakefield. Charles Griffin and Co., 1889.

For some time it has been known that a book was being written by Mr. Bevan Lewis, and great things have been expected, and for once disappointment has not followed great expectation. We recommend everyone interested in mental diseases to read this book, which is pleasantly written, and is most carefully arranged and edited; it is, without doubt, the best English book of its kind. It is written from the pathologist's point of view, and thereby loses something of clinical interest, and is hardly suited for the general medical student, who has only time for a short general study of medical psychology. It is essentially a book for the thoughtful physician and for the medical officers of asylums. It is full of the psychology of the latter part of the nineteenth century. Darwin and his speculations in general natural history were naturally followed by Herbert Spencer and his philosophy, and Hughlings Jackson has applied to neurology the teachings of this school of common-sense, though wordy, philosophers, and it was earnestly hoped that from the younger physicians specially interested in insanity a book on the same lines would be written.

Dr. Mercier gave an excellent lead off, and now Mr. Bevan Lewis fills the gap for the time. The philosophy is as objective as it can be, and takes a good deal for granted.

Things are made to fit into the scheme, and whether these fittings are the only true ones or not does not so much matter; suffice it that they serve their present purpose, and form useful working hypotheses.

It is well the book should be a consistent whole, starting with the material anatomy and ending with a material pathology, giving no time to problems of consciousness, or to the possible relationships of mind to matter. Boldly the union is taken for granted, and the rest arranged on this basis.

The manual under review aims at greater completeness than any other English book on the subject. It consists of

three main divisions: the Anatomical and Histological Section occupying 114 pages; the Clinical Section over 300 pages, and the Pathological Section a little over 100 pages. It thus appears that, after all, the Clinical Section is the largest, but in this section there is less originality than in the others, and in noticing this fact we shall have to point out some evident defects, for though it is a most masterly work, yet there are certain things which we hope to see corrected in a second edition. It may appear strange that so much attention should be paid to the anatomy and so little to the physiology of the subject; but we think our author is right in not entering in detail into metaphysical questions. He takes it for granted that his readers understand Herbert Spencer's system, and can follow him when he makes use of his terms and his methods for explaining the disorders of mind. It is quite beyond the power of a reviewer to do full justice to this book without occupying too much space, and so we shall content ourselves with pointing out a few of its special features.

In the Anatomical Section the cord is studied before the brain. Good and original (though few) drawings and diagrams are supplied, and we may note that the paper and type are excellent, and that all noteworthy points are brought to one's notice by the use of larger type.

There is little new in the section on the cord or brain as far as the nerve elements are concerned; but one of the chief features of the book, both in its anatomy and its pathology, is the development and application of the studies of the author into the lymphatic system of the nervous centres.

The most careful special study of this has been made, not only in man, but also in the lower animals. We cannot do better than quote from p. 85 the summary.

The lymphatic system of the brain consists :—

(1.) In the first place, of a distensible lymphatic sheath, loosely applied around the arterioles and venules, containing numerous nucleated cells in its texture—the adventitial lymph sheath, the whole being included within a non-distensible channel of the brain-substance, devoid of endothelial lining—the perivascular sheath of His.

(2.) In the second place, of a continuation of the cellular elements of this sheath; loosely applied to the *arterio-capillary plexuses*, still contained within a perivascular channel, which now exhibits along the capillary loop sac-like dilatations—the pericellular sacs, within which the nerve cell lies, surrounded by plasma.

(3.) Lastly, of a system of plasmatic cells, with numerous prolongations, which are always in intimate connexion with the adventitial lymph sheath, and which drain the areas between the vascular branches—these we have termed the lymph-connective elements.

If we take a comprehensive view of the whole system, the channelled vascular tracts, the saccular ampullæ along the capillary tube, the canalicular-like formation of the lymph-connective elements, all embedded in a homogeneous matrix of neuroglia, we cannot but be struck by the sponge-like arrangement of the cortex, and the facilities so afforded for the free circulation of plasma throughout its most intimate regions.

And here we meet with the *spider cells*, the deiters' cells, which, as part of the lymphatic system, play, according to Bevan Lewis, so important a rôle in nervous pathology.

Great care is devoted to the description of the special nerve cells of the various laminæ of the cortex as well as to the special arrangement of those found in certain areas, and the regional distribution of the ganglionic cell in man and the lower animals is considered. Most minute study is given to the distribution of the motor cell groups in relation to the cortical surface, and thus a further separation of areas is made than that of even Ferrier, Schäfer, Horsley, Beever, etc. This division of the book concludes with a masterly summary, though, as might be expected, already the experimenters are in advance of the recorder.

The second part consists of the record of the experience of Mr. Bevan Lewis at the West Riding Asylum, and though the statistical tables and the general information are invaluable, we think that something has been lost by a neglect of recent records by other physicians. We are grateful that not another scheme of classification has been added, the arrangement being simple in the extreme, and essentially on the lines of Dr. Skae. The general contents of this section include states of depression, states of exaltation, fulminating psychoses, states of mental enfeeblement, recurrent insanity, epileptic insanity, general paralysis of the insane, alcoholic insanity, insanity at periods of puberty and adolescence, at the puerperal period, at the climacteric epoch and senile insanity.

Under each of these heads are fully discussed the mental symptoms as a whole, before special groups and varieties are considered; thus, under states of depression, the onset of the disorder with failure in object consciousness, which invariably inaugurates a corresponding rise in subject consciousness, is well displayed.

Among the groups are considered simple, delusional, hypochondriacal, and agitated melancholia. States of mental stupor are next discussed, and contrasted with acute dementia.

The related conditions of mental stupor and hypnotism are compared, and a very lucid table of the features of these states is supplied. There is nothing very noteworthy in the second section, that on Mania; but in the next, that describing Fulminating Psychoses, a good many different conditions are grouped together. There we find the neurotic and criminal subject, impulsive insanity, insane homicidal impulse, uncovering of brute instincts, epilepsy, alcohol and impulsive insanity, mimetic tendency and suicidal impulse. The foundation of this group is made clear by the statement that the dissolutions of the nervous system which issue in insanity by no means reduce the subject to pre-existent levels of mental life, corresponding in all respects to former stages of evolution; the denudation is not uniform. To carry on the simile, ruin does not follow the lines of construction in every detail. Though in this section Epilepsy is referred to, a later chapter considers this in more detail, and we shall return to it.

The character of the book makes it necessary to separate different parts of the same subject, so that for a complete study of epilepsy the reader must consult "Fulminating Psychoses," "Epileptic Insanity," and the "Pathology of Epilepsy," which in the book are widely separated. This is a drawback to ordinary students.

Among states of mental enfeeblement are placed a very extensive group, or series of groups, of cases falling under the definition of cases of acquired defect, in contra-distinction to the cases of congenital and developmental arrest.

We meet with transient and persistent enfeeblement, but in this class only the persistent cases are placed.

This is rather following the plan of Griesinger, and is convenient, but appears to us open to very serious objections, for there are certainly differences between defect, disorder, and mental instability; yet they appear together.

The clinical accounts with cases of the various forms, are well done. Recurrent insanity is considered apart, and thus a convenient clinical group is made; though here, again, we can only look upon the arrangement as provisional. To our thinking, the chapter on Epileptic Insanity, and that on the Pathology of Epilepsy and of Alcoholism are perfect, and show a power of work and originality of thought which

are admirable. We had intended quoting from this part of the book more fully, but it is too good to mutilate, and we must refer our readers to the original. The whole chapter stands or falls with Hughlings Jackson's theory of nervous discharge, and the nervous force is treated by Bevan Lewis as a very definite and material reality, behaving almost exactly like electricity. This may be right, but it is just possible there may be something more.

In considering epileptic insanity the following stages are defined :—(1.) The pre-paroxysmal; (2.) the premonitory, with the various auræ; (3.) the paroxysm, *grand* or *petit*; (4.) the post-paroxysmal period, and, later, the hysteroid and katatonic states, as well as the status epilepticus, the automatic and inter-paroxysmal states.

The part on the medico-legal relationships is clear and to the point. The study of general paralysis follows, and this, though not so original as the part on epilepsy, gives most valuable data in the large accumulation of recorded facts.

Alcoholic insanity is fully treated, and its symptoms examined and compared.

The insanity of the aged follows the disorders of development, reproduction, and decay, and leaves little to be desired and too much to be noticed in a review.

We said there were faults of omission, and we cannot consider that justice is done to the relationship of syphilis to insanity. No one nowadays doubts the important part played by this disease in ordinary diseases of the nervous tissues, yet our author all but ignores it as a cause of insanity. There was a time when syphilis was seen in everything, and perhaps Bevan Lewis marks the turn of the tide. But tides rise and fall and leave shore lines, and so with the investigation of the syphilitic nervous diseases, though we need not accept syphilis as the only cause of general paralysis, yet we think that no one who has had ample opportunities for examination will deny that it sometimes produces that disease. We admit that the minute pathology of syphilis is hard to trace, yet we hope that when once Bevan Lewis has fixed his mind on clearing it up he will not fail to make it more satisfactory. Besides this omission, we find little or no notice of the insanities secondary to other bodily diseases, so that the insanity of gout, of lead, of myxœdema, and Graves' disease are not mentioned. The further effect of this appears in a deficiency in treatment which is marked throughout the book, and one

would imagine that if any treatment is to be of use it is only of the material drug-like kind; yet nowadays moral treatment for functional neuroses has made great advances, and the humane treatment of to-day chiefly differs from that of the past generation in that finer measures are applied to restore order to the disordered processes.

The pathological work is excellent, though we should have liked more illustrations of other than the histological appearances. We are at issue with Bevan Lewis as to the miliary sclerosis and colloid bodies, though we feel great diffidence in setting up our judgment against his; yet we agree with Spitzka, of New York, that those bodies are very readily made artificially. We have ourselves specimens produced in the healthy nervous tissues of the lower animals taken immediately after death, and we have traced their genesis distinctly.

We must accept, however, Bevan Lewis' statement that he has found them in fresh-frozen tissues. It may be that occasionally, as in alcoholism, these bodies occur in life, that in some they occur shortly after death, and that in most instances they are the result of a form of decomposition which occurs during the process of hardening, especially when spirit of wine has been used.

Probably the Pathology of Epilepsy is the most brilliantly original part of this book. Bevan Lewis shows that in this—and in other allied states—there is a degeneration in the small cells of the second cortical layer which are characterized by the possession of large nuclei, and it is this nucleus which suffers first and most. "There is much reason for regarding the cells which prevail in this layer of the cortex as pertaining to the sensory type of nerve elements, and that an organic connection subsists between them and the large motor elements distributed at a lower level; in fact, we may perhaps regard these individual layers as constituting a highly complex sensory-motor arc of which they are the respective poles—that these presumed sensory units have an inhibitory control over the subjacent elements, and that lacking such control their discharge will be subjected to the periodicity of the nutritive rhythm;" the absence of the nucleus pointing, in his opinion, to loss of inhibitory control over the large motor cells.

The book closes with a chapter on the Pathology of Alcoholism, and here we find clearly described the morbid changes in the cerebral vessels, the occurrence and function

of the scavenger-cells in the outer zone of the cortex, the sclerosis of the outer zone, the presence of amyloid bodies beneath the pia mater, besides the general and local degenerative changes which may be present and their relation to the clinical symptoms met with in this disease. The similarities to and differences from general paralysis are pointed out thus:—"Whilst, therefore, the cortical lesions of general paralysis indicate an invasion from without inwards affecting the sensory elements and apical (sensory ?) poles of the motor cells, Alcoholism induces, in addition thereto, extensive vascular changes from within outwards implicating the medulla of the gyri and effecting a destructive degeneration of the medullated fibres."

But enough has been said to show what a good book has been written by the Superintendent of the West Riding Asylum.

The Rheumatic Diseases (so-called) with original Suggestions for more clearly defining them. By HUGH LANE, M.D., and CHARLES T. GRIFFITHS, M.D. Small 8vo. Churchill, London, 1889.

This is a little book of modest dimensions, but is, nevertheless, a contribution of some value to the subject. Both the authors practice in Bath, and therefore have an unusually extensive opportunity for observing cases of this class of disease. As stated in the introduction, the work is based upon the observation of about three thousand cases, each over a period of about six weeks. The following classification is suggested at the outset for rheumatic and rheumatoid joint affections of a chronic nature:—1, Chronic Rheumatism; 2, Rheumatic Arthritis; 3, Rheumatoid Arthritis; 4, Chronic Gout.

The authors then proceed to deal with each of these conditions seriatim. The first taken is *Chronic Rheumatism*, which is defined (p. 21) as a condition "in which the joints are painful, but not swollen; or, in which there is a neuralgia or even arthralgia, associated with myalgia or apart from it; or in which the various fasciæ are affected; or in which there is a general neuralgic condition supervening on an acute attack of rheumatism." Judging by the inverted commas found in the text, the definition is borrowed, but the source is not indicated. After touching on the symptoms, causes, and varieties of

chronic rheumatism, the complications are referred to, the authors remarking on the rarity of rheumatic iritis and periostitis among their cases. An interesting case is mentioned on p. 30 of a man 32 years of age, whose history pointed to peripheral neuritis rather than rheumatism, and it is stated in connection with this case that "many of the cases hitherto described as chronic rheumatism seem to be, especially in young adults, the condition more generally accepted now as peripheral neuritis."

It is with more pleasure we turn to the section dealing with *Rheumatoid Arthritis*. Here the clinical facts are marshalled with more order and subjected to more careful analysis under the headings of local and general changes. The joint lesions are well described; but it would have been interesting to learn more about the glossy skin upon which neurologists base their claim to the disease being of neuropathic origin. An extensive description is given of a certain pigmentation of the skin which the authors believe they have been the first to associate with rheumatoid arthritis, though the association is not very clearly proved.

The ingenious theory is put forth that the constitutional cause of rheumatoid arthritis is a combination of the hereditary taints of gout and phthisis, and it would have been interesting to learn the facts upon which the hypothesis is based.

The major part of the work is devoted to rheumatoid arthritis. The concluding chapters refer to *osteo-arthritis*, *rheumatic arthritis*, and *chronic gout*. The table of symptoms at the end will be found useful. It would much enhance the value of the book if in subsequent editions the analysis of cases at the end were more exhaustive and contained more detail. Bearing in mind the large field at the disposal of the authors, it is a pity that more cases are not given in extenso. Such records are always of value. In the edition before us the most interesting parts are those which refer to treatment in which the experience of the authors must inevitably carry weight.

The illustrations are not particularly good, though they serve their purpose. The phrase "nomenclated bases" (p. 21) is not particularly elegant. Perhaps the authors will think us fastidious, but we submit that it is well that medical men should pay some little attention to the art of composition.

Civilization and Progress. By JOHN BEATTIE CROZIER. Longmans and Co., London, 1888. 8vo., pp. 477.

This is a work of some importance, which want of space has prevented us noticing before. The object of the book, a somewhat ambitious one be it confessed, is "to determine, if possible, more accurately and scientifically than has hitherto been attempted, the relative parts played in civilization by the great organic factors of Religion, Government, Science, and Material and Social Conditions generally, and to connect these factors by such stringent laws and relations that the whole would be seen to form one single and harmonious scheme."

With this end in view the author in the first part describes his methods. In the second he sets before the reader his goal. In the opening chapter of this part Carlyle's question is asked: "How from a Universe of knaves to get a common honesty?" and the answer is step by step laid before the reader—namely, "by the pressure put on the moral nature of each individual by the general conscience of the community." After dealing in Parts III. and IV. with the influence of religion on society, the author passes to some practical considerations relating to different forms of government, in dealing with which he does not hesitate to reveal the fallacies of democracy.

The concluding section, which deals with the Theory of Progress, is by no means the least interesting portion of the book. All great thinkers are divided into two great schools—those who hold by the preaching of morality, and those who hold by the amelioration of existing material and social conditions. It is unnecessary to advert to the prime importance attaching to a discussion of the relative merits of these two lines of argument at the present day. Mr. Crozier deals with the question fairly and exhaustively, and concludes by giving as his verdict "that all attempts to forward civilization by *direct* moral exhortation or appeal, in the face of material and social conditions adverse to its reception, are dreams of the closet only."

In a brief note such as the present it is impossible to do justice to the work. To be appreciated it must be read and carefully digested. It is full of original suggestive thought, and will be interesting to all who, as members of a vast community, are concerned in the tendencies and evolution of the society of our times. It would seem probable that the author has closely studied the philosophy of the Germans, and, like them, expresses himself in long sentences, full of limitations. This, however, in no way detracts from the merit of the work,

and adds remarkably to its clearness and precision, qualities often lacking in books of this class. It is both pleasant and profitable reading.

Etudes Cliniques sur les Maladies Mentales et Nerveuses. Par le Docteur JULES FALRET. Paris: J. B. Baillière et Fils, 1890.

This work, by the distinguished physician to the Salpêtrière, contains the numerous articles which, during the last quarter of a century, he has contributed to the "Archives de Médecine" and the "Annales Médico-Psychologiques." The author hopes that they will not be too severely criticized by his *confrères*. On the contrary, we are sure that they will be received, both in his own country and in Great Britain, in an appreciative spirit. It is a great advantage to have the scattered papers of a thoughtful alienist and lucid writer collected together in one volume. While he notes with patriotic pride that the leading doctrines of the founders of the French School of psychological medicine have held the field for three generations, he confesses that the recognition of general paralysis ("the most important discovery of the century" in this department) has made a breach in the teaching and classification of Pinel and Esquirol. Then the study of alcoholism from Magnus Huss onwards has powerfully influenced classification by showing that alcohol could imprint definite characters upon the four great classes of mental disorder with which these master-physicians were content. So, again, the discovery of Circular Insanity by Falret père and M. Baillarger came as another blow to the admitted classification by tending to break down the idea of an essential distinction between mania and melancholia. Fourthly, the separation by Lasègue of the insanity of persecution from the order "Melancholia" made another serious breach in the psychological square. Morel introduced a further innovation by his doctrines of degeneration and his etiological classification, pronounced by the author of these memoirs to be the origin of most important modifications in mental medicine since he wrote.

Falret enumerates among the remarkable indications of progress since the death of Esquirol, in 1840, the researches in epileptic insanity and masked epilepsy, emotional insanity and insanity with the patient's consciousness of the disorder, *folie du doute* and *délire du toucher*, likewise the effects of Broca's

discoveries, and no less those of Charcot, and lastly, the researches of Lasègue in regard to the *cérébraux*, and traumatic cerebral affections. Mental pathology is advancing by such rapid strides that it threatens to completely destroy before long the edifice erected by the master-builders at the commencement of the nineteenth century. The author soliloquises on the ruin before him: "All the interior divisions are destroyed or displaced; all the boundaries and all the internal arrangements have been changed; the facade has alone been permitted to remain, and even that has been, although it still presents the appearance of an ancient edifice and may cause the illusion of the interior being preserved." True is it, as the author says, that we are in a state of scientific transition, and that we wait only for the powerful hand of some new architect who shall be able, not only to demolish, but to reconstruct a new building destined to replace it. The warning which, in the meantime, our *confrère* gives us is undoubtedly well-timed. We must not rush into hasty generalization. It is still too soon to adopt definite formulas and systems. Above all things, we are to avoid a premature dogmatism in our still incomplete department of knowledge. To do so would be placing ourselves in an exclusive church, which, by the excommunication of all dissentients as heretics, would retard the progress of science instead of its advancement.

The first article is of interest at the present time, when the question of classification has been revived in Belgium, and discussed in consequence in most other civilized countries.

"*Principes à suivre dans la Classification des Maladies Mentales*" was written in 1860, but it has not lost its value. He prefers Morel's classification to the one in use, but it does not come up to his ideal of a natural classification of mental maladies. He accepts as natural forms, general paralysis, circular insanity, epileptic insanity, alcoholic insanity, and insanity of persecution.

Passing over the article which contains the author's well-known researches on general paralysis, we note that about twenty pages are devoted to catalepsy. He confesses his indebtedness to Dr. Puel, the author of "*De la Catalepsie*" in the "*Transactions of the Academy of Medicine*," 1856. The comment made upon the usual definition of this disorder—an intermittent neurosis, recurring as an attack in which intelligence and sensation are suspended, while the special muscular lesion allows the patient to retain his muscles in the position in which the attack found him or in which the hand of

a stranger places them—is that the definition reposes upon a number of symptoms and the course of the disorder, instead of upon one characteristic. Since the pathognomonic sign, derived from the condition of the muscles, is indispensable to the description of the complaint, ought one (asks M. Falret) to admit in its definition all the cases which present this symptom, however much they may differ in other respects? If so, many cases of hysteria, ecstasy, and somnambulism, in which catalepsy is present, must be included. It is not difficult to show that this definition is too inclusive. What is the state of the muscular system peculiar to catalepsy? There is contraction, something intermediate between normal contraction and tetanic rigidity. In mental stupor there is a muscular condition resembling it, but that which distinguishes stuporose from genuine catalepsy, is the frequently appreciable efforts which the patient makes to preserve the same position for a long time, the fatigue which sooner or later follows, and lastly, the resistance which the stranger's hand experiences in attempting to return the contracted muscles to their ordinary position. There are many almost insensible shades of difference between the rigid state of the muscles and voluntary immobility, and likewise the contractions arising out of cerebral affections. The upshot of this paper is to show that under the name of catalepsy have been comprised very different phenomena.

A very careful article on the psychological theories of epilepsy follows, in which the author concludes that epilepsy is essentially a cerebral disorder, that even where modern physiology requires us to bring in the medulla oblongata to explain by reflex action the convulsive movements, the intervention may be only very secondary, and must be subordinate to diseases of the brain. The article was written in 1862, and does not mention the doctrines of Dr. Jackson. The memoir which describes the mental condition of epileptics is one in which M. Falret speaks with special authority, and his observations can never lose their value so long as epilepsy confronts the mental physician. He is painfully conscious of the danger of allowing certain epileptics to be at liberty, and at the same time the extreme difficulty of placing them under restraint. There are cases, even with a homicidal tendency, in which the intelligence remains unaffected for so long a time that they cannot be indefinitely confined in an asylum. M. Falret holds that many instances of transitory or instantaneous insanity are associated with epilepsy, although there may be no

convulsive attacks. What the author thus expressed thirty years ago in support of M. Morel's doctrine of *épilepsie larvée* does not require proof or apology at the present day.

"The Disorders of Speech and Verbal Memory in Cerebral Affections" is an article written in 1864, and discusses aphemia, aphasia, alalia, etc., and is a remarkable contribution to a subject upon which so much has been written since it appeared. We must not pass over the essay on *Folie raisonnante*, or moral insanity. Truly is it spoken of as one of the most vast and difficult questions which can be discussed by medical psychologists. His conclusion is, that while we must recognize that the scientific limits separating these conditions of moral disorder from insanity, properly so-called, cannot be rigorously defined, the theory of partial responsibility ought to be absolutely rejected, no less for the different varieties of moral insanity than for all other well defined forms of mental disorder.

The article on Communicated Insanity (*folie à deux*) was prepared in collaboration with Lasègue in 1877. Since that year there have been many contributions made to the study of this highly interesting form of mental disorder, but none is more instructive than the memoir of M. Falret.

The volume closes with an important paper on Circular Insanity written in 1878-79.

This collection of psychological essays deserves no ordinary commendation. They are worthy of the son of the celebrated Doctor J. P. Falret, in whose footsteps he has followed not only in his acute observation and clear description of mental disorders, but in collecting together in declining years the productions of a lifetime. They agree in having exercised no inconsiderable influence upon the development of mental science.

Synopsis of Human Anatomy. By JAMES K. YOUNG, M.D.
Philadelphia and London, 1889. F. A. Davis, Oxford Street, W.

This small work, one of a series entitled "Physicians' and Students' Ready Reference Series," will be found to correspond to its title. It is a useful compendium, and compresses within some 400 pages a large amount of information. The cranial nerves are clearly tabulated at the end of the volume, and their distribution and function presented in a bird's-eye view.

About 50 pages are devoted to the nervous system. We should have expected to find the localities of the cerebral motor centres indicated. The table of the spinal nerves is very complete. As a handy book of reference it can be recommended. Dr. Young is the Assistant Demonstrator of Surgery in the University of Pennsylvania.

The Philosophy of Mysticism. By CARL DU PREL, *Dr. Phil.*
Translated from the German by C. C. Massey. 2
Vols. London : George Redway, 1889.

This is a work of original speculation, which, however far it may fall short of a rigid scientific basis, forms an interesting subject of study. It is claimed that Carl du Prel is the first to have shown that somnambulism and allied conditions are not morbid in their nature, but constitute a higher plain of normal sleep, while the remarkable phenomena developed by somnambulism are merely an exaltation of ordinary dream life. The aim of the work is to level up, not to level down—that is to say, sleep and dreams are regarded as of higher significance, not somnambulist phenomena of lower import. It will be seen that the lines upon which this work is written are of a transcendental order, and not on those of recognized cerebral physiology. This fact, however, ought not to prevent our considering whether an original mind may not throw out some fresh ideas worth picking up among much which may be considered unscientific chat. We are not one of those “critics who are only able to explain every departure from their opinions by the insanity of the author.”

Let us hear what a Mystic has to say in regard to natural somnambulism. After some preliminary general observations, the author maintains that somnambulism produces susceptibility to *finer* influences than are received by the senses of the waking person. Hence the sense thus educed releases faculties of a superior order. Still, the writer warns us against overestimating this condition. The will is passive, and therefore the associated mental condition is to this extent beneath that of man when he is awake, although, as asserted, there is a transitory exaltation of the faculties, unknown to us when our senses are cognisant of the external world. So far the author can be followed, but then comes a speculative suggestion, which can have no practical interest for the mental physiologist. Are there, upon other planets, beings of more favour-

able constitutions in regard to sensibility, who possess normally the full development of the faculties temporarily called into operation in certain phases of somnambulism? It is claimed that it follows on the principles of evolution that the present organization of man is but rudimentary to his future development. Somnambulism anticipates man's biological successor. As to ordinary dreams, while at first sight they resemble the materials of our daily life thrown together disconnectedly—

“ Dreams are the interludes which fancy makes ;
When giant reason sleeps, the mimic wakes,
Compounds a medley of disjointed things,
A court of cobblers or a mob of kings.”

—yet further consideration shows that dreams have their positive sides. He who sleeps experiences influences which before remained below the threshold of sensibility from the interior bodily sphere. Faculties latent when we are awake become conscious of a transcendental world into which a transcendental Ego enters. It comes to this, that we all of us have a double consciousness and a double Ego, one on this side, and the other on the other side of the normal threshold of mental life and consciousness. Hence when the somnambulist awakes he loses memory of his dreams, and passes back into the mental life which was suspended when he went to sleep. The author proceeds to introduce clairvoyance, and asserts that somnambulism is the condition, without which it cannot arise, but not the cause from which it springs—just as ordinary sleep is the condition, not the cause, of the inner-waking which is manifested as dream. We are here in the realm of unaccepted facts, or rather, statements. It is easier to allow that the sleep of somnambulism may be one of the forms of the curative force of nature.

Unfortunately du Prel is not content to stop here, but advocates the curative instinct of “somnambules,” which is likely to encounter in the future, as it has done in the past, “violent attacks from physicians.”

We have given the author's mode of treating somnambulism as an illustration of the general style of the work, and we are afraid the reader will not think that the path on which he is invited to enter will satisfy his scientific instincts. A chapter follows on the faculty of memory, in connection with which some facts are prominently brought forward which afford interesting reading.

The concluding chapter of the work is entitled "The Monistic Doctrine of the Soul." Here the theory is still further insisted upon that to psychical indications in man we must look for the field of future evolution. Their abnormal functions must be studied from the Darwinian point of view. By a very different route our author thus arrives at the same point as that from which Romanes starts, another illustration of the truth that extremes meet.

Here we must leave the author of a book which is sufficiently suggestive, but is deficient in digestive power in regard to psycho-physical phenomena.

Old Age: The results of information received respecting nearly nine hundred persons who had attained the age of eighty years, including seventy-four centenarians. By GEORGE MURRAY HUMPHRY, M.D., F.R.S. Cambridge: Macmillan and Bowes, 1889.

Among the various satisfactory results of the "Collective Investigation Committee" the book now under review is second to none in interest. The amount of labour expended upon the work must have been very great indeed. Professor Humphry is to be congratulated on the completion of his labour, and the medical profession, as also the general community, are to be also congratulated on the mass of information placed at their disposal, analyzed and digested as it has been by the author. The relation of old age to psychology is a very close one. When we turn to the chapter which treats of maladies of aged persons based upon the examination of reports upon 824 persons between 80 and 100 (340 men and 382 women between 80 and 90, and 92 men and 110 women between 90 and 100), we find under "brain affections" that surprise is expressed at the frequency with which attacks of unconsciousness, even when followed by a paralytic seizure, are more or less recovered from.

Twenty-five such cases are recorded of this kind, hemiplegia being the most frequent form and convulsions being sometimes present. Complete recovery occurred in some instances. A man suffered from three attacks of paralysis, at 82, 85, and 86, and one woman, in addition to several attacks of unconsciousness, had left hemiplegia and convulsions at 78, paralysis of the left hand at 82, and severe apoplexy at 89, after which she was able to get about again,

though with weakened mind and the liability to epilepsy (p. 148). Professor Humphry notes the satisfactory circumstance that many very aged persons possess their mental faculties and take a keen interest in the events of the day. Their judgment upon them is clear, and the consideration for the welfare of others is undiminished. Active, nay, severe and continuous brain activity, so far from impairing the organ, conduces to longevity (p. 24). Titian was engaged in painting his "Pieta" in his ninety-ninth year, a picture which bears witness to his "incomparable steadiness of hand." Octogenarian statesmen who have given evidence of extraordinary mental power likewise prove how slight must, in their cases, be the wasting of the cerebral convolutions. On the whole the author feels justified in stating that while "the old man meanders on his conversation unconscious that he is repeating himself, he remembers the tales of long-past times, but forgets that he has just told them;" this condition does not often end in senile dementia (p. 24).

It appears that among the 52 centenarians recorded, the intellect when reported, was high in 11 and low in five only, and being average in 36. As many as 39 out of 47 had good memories for past events, and 26 out of 39 retained their memories for recent events. Several were conspicuous for mental and bodily activity and energy during their long lives. There is evidence that many had been engaged in either mental work or hard bodily toil, "and in different ways had played their parts effectually on the world's stage to the end of the long drama which they reached in better plight than the well-known lines of the great poet might lead us to expect. I often wish that Shakespeare had lived to give a brighter version of his seven stages and to portray the old man, not lean and slippered, but well favoured and booted, keen in life's interest, and happy in promoting the welfare and enjoyment of others" (p. 38).

In the past life history of persons between 80 and 100 it is stated that 69 per cent. had been of "energetic" temperament, while 36 per cent. had had a "placid" temperament. The "irritable" constituted 13 per cent. The intellect was described as "low" in 5 per cent.; as "high" in 21 per cent., and of average amount in 73 per cent. (p. 181).

In the returns of the present condition, habits, etc., of males from 80 to 90, amounting to 340, the state of the intellect was reported in 322 instances; of these it was high in 55, average in 242, and low in 25. The report on memory

is as follows:—Past events—307 returns; good, 253; moderate, 34; bad, 20. Recent events—260 returns; good, 166; moderate, 56; bad, 38 (p. 159).

Under the returns of males from 90 to 100 we find that of the 92 reported the condition of the intellect was ascertained in 72 instances, and was high in 12, average in 51, and low in 9. Memory: Past events—70 returns; good, 58; moderate, 5; bad, 7. Recent events—60 returns; good, 34; moderate, 14; bad, 12 (p. 177). Passing on to the female sex we find that in the returns of their present conditions (from 80 to 90) information was obtained as to intellect in 266 cases, and that it was high in 33, low in 36, and average in 197. Memory: Past events—258 returns; good, 186; moderate, 41; bad, 31. Recent events—221 returns; good, 120; moderate, 58; bad, 43 (p. 186). Taking the past history of this decennium in females, one case of insanity is reported.

Of the present condition of women during the decade of 90 to 100 there were 110 returns, of which 102 reported the state of the intellect, viz., high, 18; average, 71; low, 13. Memory: Past events—105 returns; good, 80; moderate, 11; bad, 14. Memory: Recent events—93 returns; good, 55; moderate, 17; bad, 21 (p. 198).

From the foregoing it will be seen how important to the student of mental science is the information contained in this painstaking work, which is a model of what such an undertaking ought to be. It forms an admirable guide to those who may engage in similar investigations. We must express our great sense of indebtedness to Professor Humphry for devoting so much of his time to so useful an inquiry.

An Experimental Study in the Domain of Hypnotism. By Dr. R. VON KRAFFT-EBING. Translated from the German by CHARLES G. CHADDOCK, M.D. New York and London: G. P. Putnam's Sons, 1889.

When men like Prof. Krafft-Ebing study the phenomena of hypnotism, we feel that we have a guarantee for careful observation and cautious inference. It has taken a long time to induce leading psychologists to follow in the steps of Professor Laycock and Dr. Carpenter, who so many years ago recognized the importance of this study. "At first," writes the author, "I was not without doubt, but daily

observations for several months removed them, and facts have compelled me to acknowledge that hypnotism is of the greatest importance as a means of enriching our knowledge of the physiology of the human mind, and of the relation existing between the psychical and the corporeal world."

This book of 130 pages contains a series of experiments on a highly interesting case, but it would occupy too much space to detail them here. We can only give a *résumé* of the conclusions arrived at.

Ilma S., Hungarian, aged 29, labouring under hysteria gravis, is in a high degree capable of transfer hypnotic states. As such, a state of catalepto-somnambulism and one of auto-hypnosis may be produced experimentally at any time.

In the relatively normal and lucid state the patient presents the condition of hysteria, with its usual neurotic and psychical functional disturbances.

By means of certain procedures it is very easy to transfer the patient to a state of catalepto-somnambulism. These procedures must depend upon the suggestion (sensory, auditory), and primarily, for their effect, upon a purely psychical impression. This is only possible when she is in accord with the experimenter's will.

The purely mental and suggestive mode of origin of catalepto-somnambulism, is shown by the fact that its intensity, and the experimenter's control over the subject, depend entirely on the intimate accord between the two.

Hence imperfect results are obtained by stroking with a brush instead of the hand, by failing to gaze at the experimenter, or by employing other than the usual experimenter. The patient's cortex in catalepto-somnambulism is inhibited, to the exclusion of spontaneous apperception. However, perceptions are possible in the domain of hearing and cutaneous sensibility, although there are no proofs of their elaboration to apperceptions. Simple reflexes are induced by the above auditory and painful impressions.

Through the sensory and auditory avenues, the experimenter, and he alone, can overcome the inhibition of the cortex, and unlock any part of it at a time. The brain mechanism standing in relation with the suggestion, works with extreme exactitude, but only as long and as far as this influence continues. Left to herself, the patient in consequence of the cortical inhibition is devoid of all spontaneity. She resembles a statue, and nothing in her mien betokens that mental operations, even in the form of dreams are

occurring. When this statue is given life by suggestion, the absence of higher mental functions (judgment, criticism, will, etc.) is striking—she is a pure automaton.

If, however, this fully-developed state be not induced, the inhibition is incomplete, and will, apperception, etc., are not entirely held in check, and on passing into the lucid state, one finds the patient does not altogether forget the events which occur during somnambulism.

In this incomplete state contractures cannot be produced, and phonographic experiments fail.

The regions of the cerebral cortex set free by suggestion are very impressionable. Since the nervous paths and sense organs are not hyperæsthetic, this increased impressionability must be central (psychical.)

That any reflex action which is produced is through the channel of the sensory nerves of the skin, is shown by the fact that if there is hemi-anæsthesia the result on that side is *nil*.

It is evident, then, that the basis of the experiments in hypnotism is a psychical factor between patient and experimenter. In other words, everything results from suggestion, and the ways by which it is possible are the auditory and sensory paths.

After manipulations with the magnet, bodies not magnetic have the power in the hands of the experimenter to produce spasms.

More remarkable is the possibility of successful suggestion in centres and paths which in any case are not influenced by the conscious will in a normal psychical condition. Many of these suggestions as the production of goose skin by the suggestion of cold, the induction of sleep, etc., fall within the range of physiology.

The results of suggestion in the domain of the vaso-motor and trophic nerves, and the best regulating centres remain in the present state of science inexplicable. That these effects are not simply possible by means of the psychical influence of the experimenter, but may be a result of hallucinatory suggestion, is shown by experiments. They form a bridge to that auto-suggestive influence over the functions of the body, the occurrence of which in hysterical patients in the form of bloody sweat stigmata cannot be doubted. The distant effect of medicaments proved to be an error.

Experiments as to a possible transposition of sense were not made because it has been shown to be a self deception, and is opposed to the elementary laws of physiology.

Clairvoyance was for the same reason put aside. Only one experiment was tried in divining the experimenter's thoughts by the patient. It is concluded that in all cases where this is alleged to have succeeded, unintentional suggestions on the part of the experimenter explain the result.

Suggestions with reference to transformation of personality, the creation of hallucinations and false perceptions are interesting to mental science as experimental productions, and offer many analogies with the auto-suggestions of dreams and insanity.

Hypnotic suggestion is a valuable addition to the therapeutics of functional nervous diseases.

(To be continued.)

Die Rolle der Suggestion bei gewissen Erscheinungen der Hysterie und des Hypnotismus, Kritisches und Experimentelles. Von Dr. ARMAND HUECKEL. Jena, 1888.

Along with the recent rapid growth of the practical use of hypnotism in France there has been constant polemic between two main groups of theorists. On the one hand are the supporters of the hypothesis that every effect of hypnotism is the result of suggestion which may be conscious or unconscious on the part of the agent and the subject, and on the other are the supporters of the doctrine of a rather earlier date, which has found special favour at the Salpêtrière, that there is a natural sequence of the conditions of the subject, when once the hypnotic state is entered upon, which starts with lethargy, passes on to catalepsy, and thence to somnambulism. This second course, it is naturally granted, is not quite invariable, or else there would be hardly room for argument, but it is defended as the normal and typical course towards the perfection of which all hypnotism inclines, but of which there are some incomplete and even distorted examples. In defence of this it was often argued that this course and sequence of phenomena could generally be observed in an unlearned person who had never heard of these matters beforehand when he was hypnotized for the first time. If this is so he cannot be doing what he was expecting to do; and that it should be in any way suggested by the operators by their acts, words, or gesture was not admitted. That it should have been transmitted by the fact that it was in the thoughts of those present, independently of signs perceptible to the senses, was held to be too extravagant a hypothesis to be discussed by either party. The

common answer of the French suggestionists of Nancy or elsewhere has been that the hypnotized subject can be found to be susceptible to such extremely trifling, and indeed unconscious, suggestions on the part of the operator that it is probable that this is the case in all the subjects at the Salpêtrière, where the operators, after building up a theory of a normal course of hypnotism from inadequate data, carry on quite unconsciously the suggestions of what they expect. The main argument in support of this contention is that after some years now of a wider trial of hypnotism over civilized Europe, it is found that the vast majority of hypnotized subjects do not go through the stages of the Salpêtrière, *i.e.*, do not go through lethargy and then catalepsy to somnambulism, and that their phenomena, or very much the greater part of them, may be covered by a vigorous stretching of the theory of suggestion so as to explain its powerful action in response to some sign, perhaps unintentional and possibly invisible to any but hypnotic eyes. It is supposed that such a sign may be given by an innocent agent and appreciated by the acute but unconscious subject. Hückel, who was an assistant physician at Tübingen, is a keen partisan of the suggestionists, and ridicules the blindness of both the masters and pupils at the Salpêtrière in not noticing the easy accommodation of the patients there to what is wished for or expected of them, but not sufficiently concealed. He finds suggestion sufficient to meet all difficulties, and it certainly needs most thorough attention at the Salpêtrière. It ought to be no impossible problem of carefully considered science to separate most absolutely the senses of the subject from the agent at no great distance, for a perfectly isolated third person to suggest an action to the agent, and for a fourth person completely isolated from the agent and ignorant of the suggestion to watch and chronicle the results. Granted that after these preliminary precautions the action is performed, there follow three possible conclusions, *viz.* :—that the act was done by pre-arranged fraud; or that it may have been done accidentally, a conclusion easily eliminated by repetitions of the experiment; or, thirdly, that the impulse to do the act was conveyed in some way unknown to the senses. Hückel is very prudent in acknowledging that we cannot as yet know the full powers of the body and mind in a state of hypnotism; but he has realized the susceptibility of hypnotics to suggestion and is anxious to enforce on experimenters the additional care which that necessitates in experiment.

Lectures on Nervous Diseases. By AMBROSE L. RANNEY, A.M., M.D. F. A. Davis : Philadelphia, 1888.

We have referred to this book in the first number of the current year and have promised a further notice. We cannot, however, do more than indicate the plan of the book. An anatomical and physiological basis is the starting point; this is followed by the method of examination of patients and then the diseases of the brain and spinal cord are considered. A lengthy chapter on electricity in medicine completes the work. We are astonished to find, under the heading Functional Nervous Diseases, multiple neuritis, chronic lead poisoning, poisoning by bromides, arsenic, Friedreich's disease, myxœdema. In the last disease there is no reference whatever to atrophy of the thyroid. In the etiology there is the bare statement that atrophy of the "thymus" is thought to be among its causes. Even if we read "thyroid" for "thymus" (though not on the list of errata), so indefinite a reference is wholly inadequate. The description given is a poor one—the fingers are not bulbous, as stated by Dr. Ranney. We do not think the pathology of this disease is sufficiently clear to make its inclusion among nervous functional diseases warrantable. Dr. Gowers wisely omits the disease from his work on Nervous Diseases. On the whole, we cannot commend Dr. Ranney's work.

A German-English Dictionary of Medical Terms. By FREDERICK TREVES, F.R.C.S.Eng., and HUGO LANG, B.A. London: J. and A. Churchill, 1890.

There was certainly room for a good dictionary of German medical terms, and the leisure of our authors during the last five years could not have been better spent than in the preparation of such a work. It is stated that it contains about 16,000 words not to be found in any German-English Dictionary. Everyone who prepares a dictionary, if he is honest, must admit, as Mr. Treves does, that it is neither complete nor free from error; probably an exhaustive examination of the work would discover some omissions and mistakes. We think it would have been well to have included Struma, Cachexia Strumipriva, Benommensein, Hohlbildung, and to have defined Verrücktheit, with its primary and secondary forms, with more precision.

These, however, and some others we might point out,* are small omissions, and we believe the book to be not only a laborious, but an honest attempt—one as successful as could be reasonably expected—to provide the English medical reader with a very useful dictionary, in fact, one which ought to be in every library and in that of every physician who has occasion to consult works in the German language.

The Contemporary Science Series. Edited by HAVELOCK ELLIS.
London: Walter Scott. [No date.]

We draw attention to the excellent works in this series issued under the able editorship of Mr. Havelock Ellis. The following have appeared:—"The Evolution of Sex," by Prof. Geddes and J. Arthur Thomson; "Electricity in Modern Life," by G. W. De Tunzel Mann; "The Origin of the Aryans," by Dr. Isaac Taylor; "Physiognomy and Expression," by Paolo Mantegazza; and "Evolution and Disease," by Dr. Bland Sutton.

It is promised that in this series "all the questions of modern life—the various social and political economical problems of to-day, the most recent researches in the knowledge of man, the past and present experiences of the race, and the nature of its environment—will be frankly investigated and clearly presented." In a future number we shall review the works which have reference to Mental Science.

We are glad to see the date of publication given on the title page of the last work issued. The omission in some of the other volumes is extremely inconvenient, and ought to be eschewed.

The Asclepiad. By BENJAMIN WARD RICHARDSON, M.D.,
F.R.S.

This journal, the single-handed but double-brained production of Dr. Richardson, who from time to time has to remind reviewers that he is not the editor, but the author, continues to be punctually issued and shows no signs of exhaustion. The last number contains an article on "Death by Chloroform," *apropos* of the late commission at Hyderabad. The results

* "Hallucination of the mind" is given as the meaning of *Wahnvorstellung*, not delusion, and "illusion" is used under *Wahnbild*, and in the terms following, in a non-technical sense.

appear to the author, who was very early in the field in experimenting on the action of chloroform, to be misleading. The fact is that what may be true of the lower animals does not hold good of man. The mental differences are great, especially, Dr. Richardson thinks, in regard to the feeling of fear. The dog cannot apprehend any danger from the administration of chloroform. At the same time there is ample evidence that the subjects of the experiments were exceedingly frightened, and struggled to escape from the experimenter. Secondly, there are physical differences. Among animals there are few who are in a condition of health that can be called *Morituri*, while among men there are many in danger of death from a trifling external cause. It is among this class that death from chloroform is not infrequent. Thirdly, there are "operative" or accidental differences, such as surgical shock.

These are points of interest to the student of mental science. The other portion of the paper, equally important as it is, scarcely falls under our notice. We may add, however, that it is the opinion of Dr. Richardson that deaths from chloroform will still go on at the rate of 1 in 2,500 administrations, as estimated long ago by him. While according the highest credit to the Hyderabad Commission, he cannot admit that it has solved the problem of the cause of death in man, or has reduced that cause to one.

The other articles of this number are of equal interest, including one on Dr. Monro (with portrait), and the origin of the Edinboro' Medical School.

Everyone must desire that Dr. Richardson may be long spared to write—not edit—his truly remarkable and highly interesting journal.

Recherches sur l'Étiologie de la Paralyse Générale chez l'Homme. Par le Dr. JULES CHRISTIAN, Médecin de la Maison Nationale de Charenton.

This pamphlet, one of the publications of the *progrès médical*, contains the valuable results arrived at by the distinguished physician of Charenton, whose article on General Paralysis, written in conjunction with his colleague Ritti for the "Dictionnaire Encyclopedique des Sciences Medicales," is an excellent monograph.

We give a summary of the conclusions as to the causes of the disease, M. Christian feels justified in drawing from his wide experience of this form of mental disease —

"1. Predisposing causes : Comparative weakness of brain, congenital or acquired, in the majority of cases.

"2. Exciting causes : Anything which causes prolonged fatigue of the brain (trouble, insomnia, excess of study, or physical labour). The latter causes may be comprised in one word, *Surmenage* (overwork).

"So that if I wished to sum up all the foregoing in a general formula, I should say the cause of general paralysis is *Surmenage du Cerveau* in adult life. If these views are correct, it would be possible to push the analysis further and determine by induction the original lesion of the malady. For if we examine the causes which I have enumerated, those whose action is sudden and violent (fear, etc.), as well as those which only act slowly and insidiously (trouble, etc.), it cannot be doubted that they cause changes, rapid or slow, in the cerebral circulation. I should say as much of physical causes (traumatism, sunstroke, etc.).

"As regards the increase in the frequency of general paralysis, it appears to me to be a reality, for if the causes which I have examined are not new, we must recognize that they operate in the present day under totally different conditions ; our social condition differs profoundly from that which obtained only a century ago. Everyone has nowadays an illimitable horizon before him, and feels that on him alone rests the responsibility of reaching the goal he desires ; every ambition he is allowed to indulge in. . . . It is thus that the number of *surmenés* increases fatally, and it appears to me that the number of general paralytics must increase. If my views are correct, we cannot expect that this increase can be arrested. But it is not *civilization* which we ought to accuse, for civilization—that vague word so much abused—comprises more good than evil and improves the condition of existence. The one thing to blame is the *Surmenage*, which aims a fatal blow at those who have not the power to bear the struggle of life (*le combat pour la vie*)."

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *French Retrospect.*

By HAVELOCK ELLIS, L.S.A.

The Congress of Criminal Anthropology.

The second International Congress of Criminal Anthropology was held last August at Paris, in the large amphitheatre of the Faculty

of Medicine. A very considerable audience, including a fair proportion of ladies, assembled here during the week over which the Congress extended. Many distinguished representatives of science, law, medicine, and the administrative world came from very various countries, and official representatives were present from France, Italy, Russia, Holland, Belgium, the United States, Denmark, Sweden, Roumania, Servia, Brazil, Mexico, Peru, Paraguay, and Hawaii. Great Britain, it will be observed, was only conspicuous by its absence. Among those who took part in the proceedings of the Congress may be mentioned M. Thévenet, the Minister of Justice, Dr. Brouardel, the Dean of the Medical Faculty of Paris, and President of the Congress, MM. Théophile Roussel, Lombroso, Ferri, Garofalo, Moleschott, Lacassagne, Demange, Van Hamel, Semal, Ladame, Benedikt, Tarde, Wilson, Tenchini, Motet, Manouvrier, Alphonse Bertillon, Bournet, Féré, Coutagne, Letourneau, Mme. Clémence Royer, Drill, Clark Bell, Magnan, Topinard, Delasiauve, and the General Secretary of the Congress, Dr. Magitot.

In his opening discourse, Dr. Brouardel remarked that the Italian school had the great merit of taking up again the study of a question with which philosophy, law, and medicine have always been occupied. Every time in the history of a country that philosophic studies have free expansion, the desire to safeguard society, the spirit of toleration, the methods for ameliorating the fate of the guilty, of protecting them from themselves, and of taking them out of the environment which educates them to crime, have been the object of the meditation and study of great thinkers; and their conceptions have eventually conquered public opinion. It has been the honour of the Italian school—in the land where Roman law, the foundation of all law, was born—that it has again put into the crucible this problem of criminality, and that it has proceeded to the analysis of that problem by the only truly scientific method—by studying the psychology of criminals, and their pathological abnormalities. It will be its distinction to have declared against illusory enthusiasms, and to have founded a science which will contribute to the more efficacious protection of society.

The first communication came from Lombroso, as the recognized chief of the Italian school. He summarized what he believed to be the most important abnormal physical characteristics found among criminals—the presence of cranial and facial asymmetry, precocious synostosis, unusual frequency of left-handedness, large orbits, prominence of zygoma, large median occipital fossa, frequency of tattooing, etc. These characters, he considered, were all due to pathological causes. The discussion was at once commenced by M. Manouvrier. He began by declaring that he was by no means an antagonist of the Italian school. He granted that it had been proved that physical abnormalities are more common among criminals than among the ordinary population, but he claimed due consideration for the influence

of environment; crime is a sociological matter much more than a physiological matter. M. Dimitri Drill said that, strictly speaking, there is no criminal type; there are, as Morel had shown, organic conditions of defect and degeneration, but criminality remained above all a social question. MM. Pugliese and Garofalo expressed very similar opinions. M. Lacassagne pointed out that we too often forget the factor of misery in the production of crime; he meant not merely social misery, but physiological misery, of which the origin was intra-uterine. As regards poverty, M. Garofalo could not share Lacassagne's views; his investigations had shown that the number of criminals furnished by the middle classes is, proportionately, quite equal to that furnished by the lower classes, while for some kinds of crime the upper classes gave a higher figure than the lower. Mme. Clémence Royer called attention to the importance of hybridism in the genesis of crime. The recrudescences of criminality, she remarked, correspond to the great epochs of the mingling of races. Benedikt spoke of the relation between insanity and crime; the criminal is a diseased person, he held, or a lunatic, and we must consider the molecular troubles of the cerebral substance as well as the external physical signs. After M. Tarde, speaking as a *juge d'instruction*, had admitted the existence both of the organic predispositions to crime and the influence of the social environment, M. Brouardel joined in the discussion. Crime should not, he said, be regarded as the result of any single isolated cause, physical, moral, or social, but of all these causes at once. The diagnosis of the criminal must be subordinated to the same rules as the diagnosis of a disease; that is to say, it is made up of related and simultaneous conditions. A single sign is insufficient to reveal the criminal, just as a single symptom will not prove typhoid fever. M. Enrico Ferri, the Professor of Penal Law at Rome, whose clear and luminous statements are always worthy of attention, well summed up the morning's discussion. Crime, he admitted, is a very complex phenomenon; it is a sort of polyhedron, of which everyone sees a special side. All the points of view maintained that day were, at the same time, true and incomplete. Lombroso had brought to light the biological side of crime, but that was not the whole of it. Drill, Dekteren, and Manouvrier had shown the social side; Pugliese the legal side, which is a more special aspect of the social side. Tarde, the sympathetic critic of criminal anthropology, had not left out of sight the physiological side of crime. We must, like Moleschott and Brouardel, proceed synthetically, for crime is at once a biological and a social phenomenon. He recalled a saying of Lacassagne's at the previous Congress, that the criminal is a microbe which only flourishes in a suitable soil. Without doubt it is the environment which makes the criminal; but, like the cultivation medium, without the microbe it is powerless to germinate crime. Both biological and social aspects are fundamental in criminality, and they constitute the two essential data of criminal anthropology.

Dr. Semal, Director of the Mons Lunatic Asylum, and the official delegate of the Belgian Government, presided at the afternoon session, when various communications of a somewhat miscellaneous character were brought forward.

On the following morning Professor Van Hamel, of Amsterdam, presided, and M. Manouvrier brought forward again the question of anatomical criminal characteristics and their illusory character. M. Lombroso defended himself with his usual energy and spirit, pointing out the distinction between the instinctive criminal and the occasional criminal. He explained that he had himself given so much attention to the biological factor in criminality, although he was, above all, an alienist, because it had previously been entirely neglected. He admitted that his conclusions had sometimes been too rash, although founded on the observation of now nearly 27,000 individuals by himself and others, but he had always been ready to give up an indefensible position. The atavism of criminals, he now believed, may largely be explained by morbid causes. The discussion was carried on by other members, and was sufficient, in the opinion of M. Garofalo, to show that the divergence of ideas was more apparent than real; those who far off seem adversaries, are found on nearer view to be partisans. On his proposition, it was decided by the Congress that it is desirable to continue on the largest scale the comparative study of criminals and normal persons, subjecting them to a severe and minute examination, in order to ascertain the physical differences which separate them. On the proposition of M. Lacassagne, it was unanimously agreed that access to prisons should be made easier, and that the bodies of executed criminals should be available for scientific study.

At the afternoon session, presided over by Prof. Ferri, Dr. Coutagne read a paper on "The Influence of Professions on Criminality." Mr. Wilson followed on "The Statistics of Crime in the United States," in which he referred to the necessity of creating international criminal statistics, permitting of the comparative study of crime among different nations. M. Laschi brought forward an interesting communication on "Political Crime from the point of view of Anthropology," in which he spoke of the bearing of race on politics, and also on genius; and M. Giampietro dealt with "The Moral Responsibility of Deaf-mutes in relation to Legislation."

On Wednesday morning Baron Garofalo (the eminent Neapolitan lawyer) read an important paper on the question whether, when an individual's guilt has been recognized, the class of criminals to which he belongs can be determined by criminal anthropology. This question was discussed from, necessarily, a somewhat legal point of view, with Garofalo's customary ability and clearness. He was not concerned, he said, with the recognition of the criminal, but with his classification, and in criminal anthropology we must give the first place to psychology. He insisted on the necessity for the careful

psychical examination of the criminal, although it is necessary also to consider his physical nature ; while sometimes even the character of the crime is sufficient to class the criminal. Uniformity of punishment is a manifest absurdity ; and he referred to the progress already made in France by the recognition of the gravity of incorrigible recidivism. The old criminal law only recognized two terms, the *offence* and the *punishment*. The new criminology recognizes three terms, the *crime*, the *criminal*, and the *method of repression*. Criminal law, he concluded, must not be treated as a detached and isolated science ; it must be subordinated to psychology and to anthropology, or it will be powerless to interpret and to determine, in any enlightened legislation, the true classification of criminals. M. Alimena, a young Italian lawyer, thought that the considerations brought forward by Garofalo furnished presumptions only, and not judicial certainties. After a lively episode between M. Benedikt and M. Lombroso, M. Brouardel, bringing the discussion back to the point, remarked that the problem proposed by Garofalo—the classification of criminals—can only be resolved by the totality of the evidence. The complete investigation of the criminal can alone enlighten justice. The crime by itself is insufficient to class the criminal, just as the most senseless act is not enough to characterize a lunatic. The morning session was closed by some remarks from M. Herbette, the official director of the *Administration Pénitentiaire*. The Administration, he observed, were following the results of criminal anthropology with close attention, ready to adopt all conclusions that were proved, as they had already adopted some. While recommending zeal and confidence in the pursuit of these studies, he urged that the conclusions should be as mature and as assured as possible, or criminal anthropology would risk its authority and *prestige*.

At the afternoon session, presided over by Prof. Ladame (Geneva), M. Ferri read a paper on the determining conditions of crime—individual, physical, and social—and their relative value. M. Ferri is perhaps the most accomplished and philosophic advocate of the new criminal anthropology, and his paper, and its subsequent eloquent elucidations, were listened to with great attention. Crime, he said, is at once biological and social. Out of 100 persons living in the same conditions of misery and abandonment, sixty commit no crimes ; of the other forty, five commit suicide, five become insane, five are beggars, twenty-five commit crimes ; therefore the social environment is not the exclusive cause of crime. But, again, we must not neglect the social environment, for to mention one piece of evidence only, the maximum of crimes against property is reached in winter. And, again, the most delicate biological modifications must be considered, for rapes and crimes of violence are most common when the temperature is high ; and climate and barometrical pressure play a certain part. If the thermometer had marked ten degrees less, or the barometer a few millimetres more, perhaps such and such a crime

would not have been committed. The conclusion is that, on the one hand, we must ameliorate social conditions for the natural prevention of crime, and on the other hand exercise measures of temporary or perpetual elimination of individuals, according as the biological conditions in each case seem more or less curable. M. Alimena attached great importance to education, especially to its hereditary effects. The criminal ought not to be able to say to his judge: "Why have you not made me better?" He agreed with the words of Lacassagne at the former Congress at Rome: "Societies have the criminals that they deserve." M. Manouvrier considered that Ferri did not attach enough importance to the social factor; no two persons lived in the same social environment. This was also the opinion of M. Drill. M. Tarde expounded his views as to the characteristics of criminals being due to the professional exercise of crime. M. Féré would not believe in any professional type until it had been established by precise measurements. Turning to another aspect of the question, M. Motet advocated special asylums, like Broadmoor and Montelupo. M. Bajenoff said that, after visiting Broadmoor and the asylum at Perth, he was not at all enthusiastic about such special asylums. The discussion on the whole showed that, as M. Van Hamel said, society to defend itself must have an eye on every side.

On Thursday the Members of the Congress visited Sainte-Anne, where M. Magnan demonstrated the subject of degeneration. They also visited the Prefecture of Police, where M. Alphonse Bertillon showed his anthropometrical method of identifying criminals in action, and M. Moleschett succeeded with little trouble in identifying a man who had given a false name.

On Friday morning M. Tarde presided, and M. Pugliese, of Trani (Italy), read a report on the criminal trial from the sociological point of view. The evidence which demonstrates the existence of a crime and of a criminal can only be duly weighed by a magistrate possessing much technical knowledge. It is not enough for him to be a judge or a jurist; he must be well acquainted with anthropological and sociological science; he must know the environment in which crime is produced, and the people who are born to live and die in this environment. He advocated the establishment by the State of a college for the education of magistrates. At present there is great confusion, and the magistrate is called upon to decide complex questions of which he is quite ignorant. The duty of the judge to demand the decision of science with the power to tread it under foot was a manifest contradiction. It was not reasonable that a medico-legal judgment should be over-ridden by a jury, and it was time to reverse the ancient maxim that the judge is the expert of experts. When it is a question of legal medicine, the medico-legal expert must be the judge. There should be a medico-legal commission, whose duty it would be not to express opinions, but to give decisions. That is the only way to avoid many scandals. M. Brouardel, from the medico-

legal standpoint, said he was not able to accept the present which Pugliese offered him. Every trial had issues which were not medical, and here the medico-legal expert would be incompetent. Apart from this, he would be cautious as to using anthropological data at all. It was still premature, and to go too fast was to risk compromising everything. M. Benedikt agreed with M. Brouardel, and advocated the scientific education of lawyers, which M. Lacassagne also considers desirable.

The next paper was by MM. Taverni and Magnan on the childhood of criminals, and the natural predisposition to crime. M. Taverni had made a number of investigations on children in reformatories—a study which he called pedagogic biology—and had traced backwards the childhood of criminals, and forwards the career of unpromising children. The chief indications he had found in the childhood of criminals were inaptitude to education, resistance to family order, and the revolt against social conventions. Among adult criminals one found in childhood the same characters of inaptitude and resistance. For M. Magnan the child was often already a complete criminal, as the result of physical and moral degeneration, due to nervous, insane, or alcoholic heredity. He regarded the matter as a purely clinical one (following Moreau, of Tours, and Morel). He brought forward many interesting examples, and pointed out that in all of them sexual aberration played a very prominent part. An interesting discussion followed. MM. Motet, Dalifol, Roussel, and Herbette regretted that the State did not undertake the care of children at an earlier age, when there was greater hope of the favourable influence of physical, moral, and intellectual education. M. Lombroso, while expressing his great esteem for M. Magnan (the Charcot of alcoholism, as he called him), was not able to agree with him. What he had himself said about children was founded on the observations of Perez, Taine, and Spencer. Moral sense was often lacking in the child. He was an embryonic criminal. MM. Moleschett and Van Hamel spoke in defence of the child who is unconscious. He was not chaste, because he had no ideas of modesty. He had no respect for truth, and the destructive instinct is strong in him. M. Moleschett referred to the anecdote in which Goethe recorded the delight with which, as a child, he once produced a terrible carnage among the crockery. But we must not confuse a phase of evolution with the conditions of disease or criminality. M. Rollet, the advocate who pleads before the tribunals at Paris the cause of all children who are arrested (about 20 to 30 boys and 8 to 10 girls every day), said that he always pleaded irresponsibility, and demanded an acquittal. The child was then either handed over to its parents, or to the philanthropic society of which Th. Roussel is president. If the child appeared vicious, he demanded that he should be sent to a reformatory until the age of 20. He judged by the physiognomy and the history, but thought it would be a great advantage to have the competent advice of a criminal

anthropologist. This wish was immediately satisfied. M. Manouvrier offered to come to the Palais de Justice every day. Mme. Pigeon said that in her experience she had never met a child of five or six, however perverted and vicious, who was refractory to education. It was, however, a task requiring great care and devotion. The regeneration of the child, as M. Eschenauer said, could only be by love. M. Roussel, who has devoted his life to the cause of the disinherited children of society, spoke of the progress that had been made, and said that the tendency was to enlarge more and more the sphere of the State.

At the afternoon session, presided over by M. Drill, M. Brouardel called the attention of the Congress to troubles of development appearing at puberty. He drew a vivid picture of lively and intelligent Paris *gamins* whose precocious development is arrested at puberty, both physically and mentally. The sexual organs do not develop, hair does not appear on the body. Instead of this, at 16 or 18 they become plump and feminine in appearance and manners, and there is sexual impotence. Previously brilliant at school, they now become lazy, and incapable of sustained attention or effort. In later life they may become artists, poets, or painters, if born in easy circumstances, but their work does not give proof of the higher artistic qualities. Their devotion to those who surround them is often of almost feminine tenderness. The chief factors in producing this acquired degeneration are complex, such as overwork, unhealthy dwellings, precocious sexual habits, and early alcoholism. M. Herbet then described the efforts of the French Government in what he described as moral orthopædies. They endeavoured to remove from the child every idea of fatalism. M. Bérillon said he had been very successful in treating vicious children by suggestion, and had succeeded in curing inveterate habits of masturbation at one sitting.

M. Tarde then gave a summary of his report on the old and the new foundations of moral responsibility. In this interesting and ingenious paper, of a somewhat metaphysical character, he tried to show how moral responsibility harmonizes at once with the human conscience and with contemporary science. Responsibility rests on identity, and by identity he meant individual identity and social identity. This responsibility rests on the determination of our actions, and is only relative. Mme. Clémence Royer replied from a strictly scientific standpoint. All our acts are determined by our physical nature. M. Coutagne refused to enter the domain of metaphysics. The question was a practical one, and every individual, sane or insane, must be treated as responsible. M. Motet said the question was a clinical one. If the individual is normal, his responsibility is complete; if he is abnormal or degenerated, his responsibility is limited; if he is insane, his responsibility is *nil*. M. Manouvrier would reject metaphysics absolutely. M. Ferri said that we must not accept the conceptions of merit and demerit. All men are responsible before society, but society

has no right to punish. It has only the right to protect itself. M. Tarde, in a spirited speech, defended his position. He protested against the confusion of the criminal and the insane. There is a profound reason for the fibres of indignation and contempt that are rooted in us, and as long as they persist we shall turn them against the criminal who acts in accordance with his native and not morbid character. This peroration was applauded by the Congress.

On Saturday morning Prof. Lombroso presided. A proposition declaring that it is desirable that every Government should adopt Bertillon's anthropometric method for the identification of recidivists was unanimously adopted. M. Semal then read a paper on conditional liberation and conditional detention. The beginnings of these have already appeared in several countries, but to carry them on safely on a more extended scale it is necessary to practise the most careful physical and psychical examination of the prisoner. This would create, under the shield of medical science, a clinical field of the bar. It would also necessitate the spread of knowledge which is now lacking, and a re-organization of the administration and medical inspection of prisoners. M. Bertillon trusted that anthropological considerations would not lead the prison administration to neglect its duties of moral reformation. M. Benedikt said that prison chaplains agreed with medical men in recognizing the incorrigibility of certain criminals. M. Drill thought that we must clearly distinguish judgment from punishment. Reference had been made to the sentiments of hatred and revenge, but those sentiments were the outcome of habit or atavism. Formerly they were exercised in the same way against the insane. The change of feeling towards the insane is due to a true appreciation of the nature and causes of insanity. We do not sufficiently consider the conditions under which criminals are placed. It is not without reason that our Russian people speak of prisoners as "fortunates." M. Vesnitch (the official representative of Servia) desired that the legal side of the question should not be lost sight of. The study of anthropology and of law ought to be compulsory for all those who desire to become governors of prisons.

M. Sarrante then read a paper on the judicial applications of criminal sociology. Law students should be examined in criminal anthropology and legal medicine. Imprisonment should be for an indefinite period, and the prisoner carefully observed and examined. The jury should be modified. M. Tarde observed that advocates were already using the results of criminal anthropology, and it was necessary that magistrates should be in a position to appreciate the bearings of such arguments.

M. Taladriz then read a paper on "Criminality in its relations with Ethnography," drawing his illustrations largely from Spain, where crime differs greatly in different parts of the peninsula. He desired the establishment of an international penal code, protecting the rights of nationalities.

In the afternoon Prof. Benedikt presided, and M. Van Hamel read his report on the "Cellular System from the point of view of Biology and of Criminal Sociology." He concluded that there should be a very careful selection of cases for cellular isolation, subject to psychical and medical examination. The results depend quite as much on the treatment adopted during the cellular confinement as on the confinement itself.

On the proposition of M. Garofalo a commission was appointed to carry on a series of observations on 100 criminals and 100 honest persons whose antecedents were perfectly well known. On the proposition of M. Semal, the Congress affirmed the necessity of a psychomoral examination of the prisoner as a preliminary to conditional liberation. It was resolved also that it is desirable that law students should be instructed and examined in legal medicine; and, on the proposition of M. Eschenauer, that the direction and instruction of young children in reformatories should be confided to experienced women.

In his closing discourse Prof. Brouardel remarked how various and complex are the issues raised by criminal anthropology. They were dealing with one of the most interesting and profound of all problems—a problem which had in all ages exercised the human mind. The Congress had brought together some of the materials for a future edifice, although they were not yet able to raise it.

The "Archives de l'Anthropologie Criminelle" was the official journal of the Congress, and the number for last September was entirely devoted to its proceedings. The "Actes" will probably be published during the present year. The next Congress will be held at Brussels in 1892.

2. Australian Retrospect.

By D. HACK TUKE, M.D.

Insanity in Australian Aborigines, with a brief Analysis of thirty-two Cases. By F. NORTON MANNING, M.D., Inspector-General of the Insane in New South Wales.

A Case of Sporadic Cretinism, with remarks by Dr. MANNING.

These reprints from the "Intercolonial Medical Congress of Australasia Transactions" are of much interest, and if our space allowed we should transfer them entire to our pages.

It appears that insanity, if we may credit the accounts of the early colonists, was very rare among the aborigines of Australia. As, however, the survival of the fittest was carried into practical effect, by slaughter of the maniacs, the permitted suicide of melancholiacs, and allowing demented to die, it is difficult to assert positively that there

was less liability to insanity among the aborigines than civilized nations. This, however, would seem probable, considering their freedom from worry and the absence of consanguineous or even inter-tribal marriages. Mr. Phillip Clancy says : " I have never observed insanity or hereditary or chronic complaints among the natives, except in those vitiated by the white people." Again, Mr. James Dawson says : " Among the aborigines there is more insanity since the use of intoxicating liquors, and especially since they began to disregard their laws of consanguinity of marriage." Dr. Manning states : " We have, in New South Wales, passed from a period in which insanity was almost unknown among the native race to one in which it is almost twice as common as among the European race inhabiting the same territory." He adds that a considerable proportion of the cases admitted to Queensland asylums since 1868, and to those in New South Wales from August 1st, 1868, to December 31st, 1887, " were due directly to drink, four or five to imprisonment, awarded either for offences springing from drink, or from violence which, though within the ethical code of the nation, was by civilization accounted a crime." As might have been expected in a dark-skinned race, the prevailing type of the malady was mania, usually acute, and as a rule accompanied by turbulence and violence, and this passed away rapidly—much more rapidly than in Europeans—into dementia, with filthy and degraded habits. Epilepsy occurred in three cases, and the fits were well-marked and severe. No case of general paralysis, or anything that could have been mistaken for it, were seen, and there were no cases of monomania or delusional insanity.

A Case of Sporadic Cretinism in the daughter of an Irishman is illustrated by photographs. The height was 35 inches, and her weight 56 pounds. The figure was broad and squat, and there was a considerable development of fat. The abdomen was protuberant, and the legs were bowed and twisted. There were no signs of sexual development, although 18 years of age. So far as could be ascertained, the thyroid gland was absent, and above the clavicles were the peculiar fatty protuberances usually seen in these cases. The circumference of the head was 22 inches, and the vertical measurement from the insertion of one ear to the other was 12 inches. In shape it was brachycephalic, with considerable occipital protuberance. The face was flat and broad ; the cheeks hanging and jowl-like, and the eyes set somewhat far apart ; and the mouth was always partly open, and the point of a large, smooth, flabby tongue visible ; the lips were thick, and the nose flat and ill-formed. The palate was not markedly abnormal, and the teeth, though ill-shaped and decayed, were fairly regular. The senses all seemed good, but perception was very slow. The speech monosyllabic and indistinct, but she could say a number of words, and tell the names of all ordinary articles about her. She recognized a penny, but called all silver coins without distinction a shilling.

She could count up to four only. She could tell her name and age, but no other particulars of her history.

Dr. Manning accompanies the report of this case with a sketch of the pathology of sporadic cretinism and the literature of the subject.

University of Sydney.

We have received from Dr. Norton Manning the questions in psychological medicine at the third professional examination, held December 18th, 1889 :—

EXAMINERS.

DR. NORTON MANNING.
DR. CHISHOLM ROSS.

The first and any other three questions (but not more than four altogether) must be attempted, and the certificate must be criticized and corrected.

1. What are the questions you would especially ask, and what means would you take to ascertain a man's Testamentary Capacity? What would lead you to suppose him to possess this capacity, although his mind might not be sound on all points?
2. Mention the varieties of Mania or Mental Exaltation. Describe the symptoms, physical, sensory, and mental, and the course and treatment of Acute Mania.
3. State the difference between Insanity, and Idiocy and Imbecility. Describe the characteristics of Scrofulous or Kalmuc Idiocy. Mention the possibilities of improvement by teaching in the various forms of Idiocy.
4. What treatment would you adopt in a case of Acute Delirious Mania? With what other diseases may it be confounded? Give the differential diagnosis.
5. Give brief definitions of—Insane Delusion, Hallucination, Jacksonian Epilepsy, Mental Stupor, Mania *à potu*, Cretinism, and Hypochondriasis.
6. Give the chief symptoms in a case of Adolescent Insanity. Describe the treatment of this form of Mental Disease, and mention the grounds on which you would conclude that complete recovery had taken place.

Criticize and correct the accompanying faulty certificate.

Dr. Manning has, we regret to hear, resigned the lectureship in this department. He is succeeded by Dr. Chisholm Ross.

3. *German Retrospect.*

By W. W. IRELAND, M.D.

Das Doppel-Ich: von Max Dessoir. Schriften der Gesellschaft für Experimental-Psychologie zu Berlin. Karl Siegesmund, Berlin. 1889.

The title of this pamphlet has its attraction, and the author excites our curiosity by promising to prove that in every man there are the traces of a second personality. After a little examination one finds

that Mr. Dessoir has nothing new to tell us ; he simply takes advantage of words used too vaguely to state a view which his evidence cannot sustain. It is true, as he says, that consciousness and memory are the two elements of personality. It is also admitted that a man may lose for a time the remembrance of the antecedent and accompanying circumstances of his daily life, the when, where, and how which he habitually carries about with him. This is lost in dreams, and sometimes is missing on the first awaking from sleep, and in deep reverie. It is generally lost in the state of somnambulism and in the induced condition of hypnotism. Mr. Dessoir tells us that the hypnotized person or the sleep-walker forgets his previous condition in the ordinary waking state, while his memory runs back to events and experiences in the previous condition of somnambulism or hypnotism. This is certainly not always the case, but granting that it often is so, we cannot admit that it proves a double personality any more than that the dreamer is a different person from the man awake. Moreover, the sleep-walker or hypnotized person is not entirely deprived of memory. He retains his powers of language and acquired accomplishments. It is deeply interesting and deeply mysterious that one human being should have his memory running along two distinct links of association as in the cases of Felida and Leonie, cited by Mr. Dessoir. He tells us that Wolfart relates a case in which a woman remembered what had happened to her thirteen years before in magnetic sleep, of which she had no memory in the waking condition. Nevertheless, double memory will not make two distinct beings ; neither will the consciousness of two parallel acts. We quite agree with Max Dessoir that a man can follow out two mental processes at once, especially if they are of a dissimilar character. This was well-known to the old metaphysicians. It has been explained as owing to the two hemispheres exerting themselves independently of one another. Dessoir rejects this explanation in a very summary manner.

There is no doubt, he observes, of the relative independence of the two hemispheres, and the connection of the disturbance with mental derangement is certain. But to refer everything to a simple divergence between the action of the right and left side of the brain is over-driving a short-legged generalization. After the same dogmatic fashion the author writes : " I take it as proved that the higher nerve centres can work unconsciously, that is to say, some of their functions stop at the threshold of consciousness, although a man like Lewes assumes the presence of consciousness in all nerve actions, not even excepting simple spinal reflexes." Of course, we know that many processes go on in the brain, such as nutrition and waste, of which we are unconscious. Much of the confusion of thought arises from the loose way the word consciousness has been used by some writers. Sometimes a man is said to be " unconscious " in dreaming or in sleep-walking, or in those cases in which the memory of actions or mental processes rapidly fades away. French writers are even less exact : Their word *conscience* means both

consciousness and conscientiousness. We cannot find anything in the pamphlet which really supports Dessoir's views save what is called post hypnotic suggestion. It is stated at page 18 that Herr D— told the hypnotized subject that after he had smacked his hands seventeen times he must do some action. The subject on awakening had quite forgotten this command, and being asked what he should do after the noise had been made fifteen times the subject said he did not know what he should do after the seventeenth clap, but when these two remaining strokes had resounded, he automatically executed what he had been told to do in the hypnotic state. Similar statements have been made of individuals obeying orders given many days before, keeping a due record of the days or hours elapsed, not by any vulgar process of arithmetic or attention or notation, but some other way which it would be too much to say we are left to imagine, but which, in fact, no one can imagine. For my part I am not satisfied of the correctness of the manner of stating these observations. A clever hypnotic operator will make his subjects state everything which he wants, and frequently he multiplies his own errors and self-deceptions, through lack of careful analysis. The following gives a *résumé* of Max Dessoir's principal conclusions :—

1. Human personality consists of at least two schematic, separable spheres, each of which is held together by a chain of memory. Hypnotism may be defined as a state of artificially induced preponderance of the secondary ego.

2. Many facts which philosophy brings forward as proofs of an immortal soul may also be explained on the assumption of an empirical second self, and in this self the hypersensuous human capacities must become confused in occultism.

3. Philosophy is not satisfied with an unknown localization in the hemispheres, but must have in each hemisphere a parallel substratum for unconsciousness as well as for consciousness. The one is characterized by reflex activity ; the other by inhibitory power. The one works after a smooth and mechanical fashion ; the other through less accustomed paths.

The last number of the "Centralblatt für Nervenheilkunde" appeared on the 15th December last. It had continued for twelve years. In bidding farewell to his readers, the editor, Dr. Erlenmeyer, explains that he has no longer time to devote to the care of the journal. The "Centralblatt" was a useful periodical, conducted with great ability, and sustained by a numerous staff of contributors, of great scientific and linguistic attainments. Some of them purpose beginning a monthly journal of neurology, which is to have an international character.

Since we gave the last German Retrospect there have passed away some men of great distinction in the study and treatment of insanity—Doctors Hagen, Kandynski, Leidesdorf, Nasse, and Westphal, all

men from whose writings and observations the medical world has derived much instruction. I venture to devote a page to a notice of the Russian psychologist, to whom attaches the peculiar interest of a man of great merit struggling with cruel misfortunes. (See *Obituary*.)

Jacksonian Epilepsy.—Dr. Löwenfeld, of Munich, has filled eight pages of the “*Archiv. für Psychiatrie*,” Band xxi., 1 and 2 Heft, with an elaborate sifting of the current views on Jacksonian epilepsy. It is now well-nigh thirty years since Dr. Hughlings Jackson first published the observations in which he assigned epileptic spasms confined to particular groups of muscles to irritation of certain parts of the cortical matter of the brain. This view pointed to the localizations of Fritsch and Hitzig, and was in its turn confirmed by the experiments of Ferrier. In process of time, Dr. Löwenfeld observed, that not only circumscribed lesions of the cortex, but diffused superficial diseases of the brain as well as lesions below the surface could cause localized convulsions. It has even been shown of late years that Jacksonian epilepsy can occur without any organic affection of the brain. Dr. Jackson’s generalizations have been taken as the foundation of surgical operations, but Dr. Löwenfeld observes that even when the trephine is used we should first ask if there is an organic lesion, and then we may put the question, Where is the lesion situated? The most common causes of the irritation which induces Jacksonian epilepsy are tumours of the brain, more rarely abscesses and softening. A few cases have been published where it followed upon parenchymatous encephalitis, general paralysis, and multiple sclerosis. To these Dr. Goldstein (“*Erlenmeyer’s Centralblatt*,” 15th December, 1889) adds some cases of uræmia and peripheral nerve lesion, and even of hysteria. Dr. Löwenfeld details twelve cases of Jacksonian epilepsy; in only two of them was there an examination of the brain after death. He comments on these cases of temporary paralysis, which follows a succession of epileptic fits, and which Dr. A. Robertson has treated as caused by muscular exhaustion. These paralyzes, Dr. Löwenfeld observes, sometimes come on hours after the last fit, and are unaccompanied by rigidity. Dr. Löwenfeld admits the reality of sensory epilepsy in which irritation of those parts of the cortex which have sensory functions is shown by flashes of light, sounds in the ear, a feeling of cold and pricking in different parts of the body, or by scotoma, deafness, and insensibility in some areas of the skin. These deranged sensations are sometimes accompanied by right-handed paralysis and aphasia. He cites a case from Gowers of a young man who saw something glittering in front of him, as if he had a plate of polished steel on his breast. At the same time he felt giddy, and had a violent pain in the eyes. After this, almost every day the patient had daily attacks, which were sometimes preceded by a flickering of light. This was followed by a pain darting from the neck towards the eyes and nose.

There was contraction of the field of vision, so that the road seemed to become narrower. These attacks disappeared under the use of bromide and belladonna. Three months after, there were violent headaches, followed by incoherent speech and hallucinations of vision. After being in a comatose state for about two days the man died. There was found a large sarcomatous tumour, which occupied the right occipital and the posterior portion of the parietal lobe.

Dr. Löwenfeld is not satisfied with the instances given of psychical epilepsy. This is said to be manifested in two forms, maniacal excitement and instinctive impulses. Such fits of sudden fury or senseless impulse cannot be treated as fair equivalents for the convulsions in Jacksonian epilepsy, unless they were proved to depend upon a circumscribed lesion in that part of the brain believed to possess purely psychical functions. At the end of this paper Dr. Löwenfeld combats Roland's sentence that Jacksonian epilepsy has nothing in common with epilepsy but the name. Spasmodic action of a single muscle may appear to differ from those convulsions of the whole body in which consciousness becomes lost, but the difference is in the quantity of the discharge, not the quality. The smallest spasm of a cortical character, he remarks, contains an epileptic element as much as the most transitory form of the petit mal and the most fleeting sensation of an aura.

Verbigeration as a Symptom.—Dr. Clemens Neisser has a paper of 66 pages of the "*Allgemeine Zeitschrift für Psychiatrie*" (xlv. Band, 2 and 3 Heft) on verbigeration, by which he means the continued repetition of single sounds, words, sentences, or parts of sentences. In some cases this is done with mechanical perseverance, night and day. It is sometimes observed with those suffering from epileptic insanity. Kahlbaum treated this repetition of words or sentences as one of the symptoms accompanying katatony. Here is a translation of one of his cases.

The patient for three months presented without any interruption the appearance of want of mental direction, speechlessness and waxen rigidity of the body. At the end of March the form changed. Instead of an absolute silence, he commenced to speak incessantly, repeating in a monotonous voice a few words concerning love and religion. For example: "Love is God, love, love is God, love, love is God;" another time, "God in God, God, God in God, God in love, God, God, God, God in love, God in love," and so on; or, "God—love—God, we thank thee, Father, Father, I am thy child. God love God," etc.; "Thou thrice great God, thou thrice great God." He sometimes added to these words a sentence between, as, "it is called," or, "I say," "truly." Sometimes the words were softly spoken, at other times they were poured out loudly and very quickly. During the night, as a rule, he ceased speaking; if he continued to do so it was in a low tone. If anyone laid a hand on his forehead the loud speaking ceased, and he whispered the same or like words. Sometimes

the patient changed without any conceivable cause from loud to whispering tones in a long succession of words. He lay either quite flat on his back or raised the upper part of the body a little and bent the head backwards. Sometimes the words were uttered painfully through the teeth, or single words were brought out slowly and in separated syllables, as if he were compelled to speak mechanically against his will. The mouth and muscles of the eye were often powerfully distorted during speaking. He soon became very hoarse, spoke in a low tone for a long time, and then changed to loud speaking. From 19th May till 2nd June the patient did not utter any words. He then began to speak as before. This lasted with little interruption until his death on the 21st August. When he was very weak his voice was grumbling, and finally moaning. Since the beginning of April he was troubled with fever and slight cough, symptoms of acute tuberculosis of the right lung, of which he died.

Neisser remarks that verbigeration sometimes accompanies *melancholia attonita*, and this is difficult to explain. Why should there be a rigidity in the muscular system, tonic spasm, with continual repetition of a few words, clonic spasm of the vocal centres? Verbigeration often goes along with melancholia and a certain pathetic cast of the voice and disposition to theatrical pose. Verbigeration sometimes accompanies paralytic insanity. Westphal has described the repetition of words or phrases as sometimes accompanying abortive insanity, that is, mental derangement which often comes within the ken of the consulting physicians without ever reaching the medical superintendent of an asylum. A lady under his observation who had suffered at different times from dominant ideas told him that when eight years old she felt compelled for several hours to repeat the word "Mappe," she did not know why.

Dr. Neisser observes that idiots, who are, as a rule, speechless, occasionally catch up and repeat words or phrases often in a meaningless manner. Dr. Neisser describes what he calls written verbigeration, in which the patient goes on writing, with less or more sense, the same words or combination of words. Dr. Neisser describes a number of cases in great detail. This partly explains the length of his paper, though in other ways it is not altogether free from the symptom under consideration. There is another kind of verbigeration which Dr. Neisser neither describes nor illustrates. Instead of continually repeating the same phrases, the patient keeps on uttering a torrent of words, sometimes of considerable diversity. These words have no connected meaning, though they may express the procession of a number of delirious ideas. In some of these cases the patient can act in a more or less sensible manner; he has command of his actions, which he has not of his words.

Hallucinations of the Muscular Sense.—At the end of his paper Dr. Neisser takes occasion to regret that it has been finished before the appearance of a pamphlet by Dr. August Cramer. In the same

number there is a review of this treatise. The title is "Die Hallucinationen im Muskelsinn bei Geisteskranken und ihre Klinische Bedeutung," Freiburg, i. B., 1889.

We gather from the review that Dr. Cramer, who is assistant physician to the psychiatric clinique at Freiburg, has for several years been studying perversions of the muscular sense, both in those muscles which move the body and in those which turn the eyes, and also the disorders of the speaking apparatus. Dr. Cramer assumes the existence of a muscular sense by which notice of the slightest movements of our muscles is conveyed to the brain, so that we obtain a correct view of the situation of different parts of the body. When false impressions of the muscular sense are generated in the mind delusions naturally follow. It appears that in paranoia these delusions of the muscular sense are commonest. Those who suffer from this symptom either recover in a few months or, at most, from one to three years, or become mentally enfeebled. They never pass into the so-called chronic state of paranoia, in which the patient retains for years a considerable amount of intelligence. Along with these hallucinations of the muscular sense there are dominant ideas, involuntary speeches, and thinking aloud. In his description of this form of paranoia, the author distinguishes the following types, which are illustrated by a number of cases:—

1. Isolated appearance of thinking aloud.
2. Isolated appearance of dominant ideas.
3. Alternating appearance of dominant ideas, involuntary speech, and thinking aloud.
4. Combined appearance of all symptoms: involuntary movements, positions and acts, involuntary speech and ideas, thinking aloud, hallucinations and delusions of sight.

These different groups have the same prognosis.

The author concludes his very remarkable researches thus:—

1. The symptoms which we attribute to a hallucination of the muscular senses have this in common, that they occur principally in the acute and subacute stages of paranoia.
2. Amongst these symptoms thinking aloud and involuntary speech exercise a deleterious effect if they last long.
3. There is a kind of paranoia in which the thinking aloud is the only prominent symptom.
4. In other paranoiacs, dominant ideas, thinking aloud, and involuntary speech succeeding one another are the prominent symptoms.
5. In the form of paranoia in which katatony is observed thinking aloud seems to be a constant symptom, and to have an unfavourable effect on the issue of the disease.

Sudden Recoveries from Insanity.—At a meeting of the Psychiatrischer Verein of the Rhine Provinces reported in the "Allgemeine Zeitschrift" (xlvi. Band, 1 Heft), Dr. Peretti read a paper on sudden recoveries from insanity. These gratifying but rare occurrences are

principally met with in melancholia, and acute delirium accompanied with hallucinations. Cases are on record where such recoveries followed upon large bleedings, wounds, heavy falls, and unsuccessful attempts at suicide. Dr. Peretti observed two instances where there was a sudden recovery from paranoia. He also describes two cases in women in which the mental delusions gave way to reasoning and observations directed to convince them that their notions were foolish. A young woman of 21, at Siegburg, who had occasional epileptic attacks, gave out that the Emperor, in the shape of a young man, had come to her and promised to take her away to Berlin and marry her. Shortly before Easter she suddenly declared that if her betrothed (the Emperor) did not come to fetch her, she would have nothing more to do with him, and would seek a place. When the time came she recognized her delusion, became quiet and orderly, so that she was dismissed after several months. Some time later she married, and now is the mother of several children, and in good health.

The following is selected as one of the shortest cases reported by Dr. Peretti:—Philip H., 45 years old, keeper of an inn, was admitted into the asylum at Andernach on the 21st of June, 1885. He had the character of being always irritable and bad-tempered, and had previously gone through four attacks of insanity in 1868, 1870, 1871, and 1875, during which he had been maniacal for several weeks. It seemed likely that drink was the exciting cause for this new attack. When brought to the asylum he was labouring under great excitement and bewilderment, which condition remained unchanged for three months. He was exalted, pretentious, made a noise day and night; he chattered, tore his clothes, and was aggressive and abusive. On the 29th of September, 1885, the patient was still in a state of great mental confusion; he tore his clothes, accused someone of dirtying his pocket, etc. After a quiet night's sleep he was less confused and aggressive, though still much excited. On the 1st of October he appeared quite clear in his mind and good-natured, though somewhat ashamed of what he remembered of his late behaviour. He said that he was now quite well; he was sure of it from what he had already experienced. On the 10th of October he was let out on the urgent request of his wife. Since then he has remained quite well. None of the previous attacks of insanity passed off so quickly.

On the Marks of Degeneration in the Criminal Class.—Dr. Kirn, in "Allgemeine Zeitschrift für Psychiatrie," xlv. Band, 1 and 2 Heft, and 5 and 6 Heft; Erlenmeyer's "Centralblatt," August, 1889; Dr. Hansen, *ib.*; Dr. Lutz, in "Allgemeine Zeitschrift," xlv. Band, 1 Heft. It is evident from frequent comments and criticisms in the psychiatric literature of Germany that the views of Professor Lombroso, the author of "L'Uomo delinquente," excite interest amongst those who have to do with asylums and prisons. In asylums we find many lunatics who resemble criminals; and in gaols we find many criminals who resemble lunatics. All researches on the nature of

insanity tend to bring out the importance of heredity. In like manner it is held by Lombroso and others of the Italian school who write in the "*Archivio di Psichiatria, Scienze Penale ed Antropologia Penale*," that the habitual criminal is really born with a fatal tendency to crime, and that he bears in his corporeal structure certain marks of his degenerative tendency. The principal of these "stigmata" are smallness of the head, asymmetry or strange form of the skull, flattening of the nose, irregular teeth and palate, asymmetry of the orbits, and a great variety of ugly forms of the external ear. The stature is generally low; deformities of the hands and feet are relatively frequent; or there is unequal size of each half of the thorax. There is often a deficiency in sensibility; colour blindness, left-handedness are more common than with normal persons. The intelligence is weak; there is a callousness of disposition, and a perverse proclivity to immorality and wickedness.

Professor Kirn gives the following as the main conclusions of the Italian school:—

1. The born criminal is the same person as the morally insane; both show the same bodily deficiencies and deformities, and the same deficiencies in mind and temper which lead to immoral actions. Both conditions are congenital and become worse at puberty.

2. The epileptic resembles the criminal and the moral imbecile. We find in him similar marks of degeneration and a similar mental condition, namely, extraordinary irritability, restlessness, maniacal excitement, the tendency to steal. In criminals, in those morally insane, and in the epileptic, there is a tendency to groundless hatred and want of self-control, so that they are liable to many wild impulses.

Lombroso treats the appearance of the criminal as a phenomenon of atavism. Civilized man has reached his present position in the ladder of evolution by passing through a similar stage. Hence in savages he looks for the analogue of the criminal, and finds features common to both in the scanty beard and hair, the light bodily weight, the small cranial capacity, the retreating forehead, the large temporal sinuses, the early synostosis of the sutures, the enormous development of the under jaw, the inequality of the orbits, the unclean skin, the large, deformed ears, the closer resemblance between the two sexes, the comparative insensibility to pain, the callousness and carelessness of disposition, the courage combined with cowardice or idleness, boasting and superstition, to which may be added a fondness for metaphor and onomatopoeia, and a taste for tattooing.

Admitting all this, Lombroso and his followers reject the theory of moral responsibility. The born criminal has a fatal tendency to crime, and all attempts at moral reforms are useless. The only hope is to get rid of him, not by the axe and halter, as in the good but rude old times, but by subjecting him to long periods of imprisonment and "by warning everyone not to marry in a family in which there is any criminal blood." Criminals themselves seem by no

means anxious to marry into respectable families, or indeed to marry at all, their unions being of a simpler character. Some writers of this school think it cruel to punish these victims of hereditary degeneration by a process of law, but would confine them in asylums till their existence wore towards an end. Others would allow society to deal with them more sternly for its own security. "The man," says M. Dally, "who does an act hurtful to society is like a viper or a mad dog; we put him out of the way or kill him, not for the sake of morality, but for the sake of security." Against such fatalism the German writers revolt. They insist that there is no special type of criminal any more than there is any type of a virtuous man. Dr. Lutz will not admit that criminals and savages belong to the same class. If a creature had progressed from apehood into an animal, like the burglar or the pickpocket, he would never have advanced any further. Were the Germans, or the Caledonians, described by Tacitus of the same class as the thieves of Berlin or Glasgow? In savage races, no doubt, the analogues of the weak-minded and criminal existed, but they perished in infancy, or sunk in the struggle to gain food, or in the feuds of warring savages. It is our high civilization with the sacredness which it attaches to human life that brings forth, sustains, and protects the existence of these creatures who belong to a pathological type, not to a physiological one.

The Insanity of Criminals.—Dr. Kirn gives the results of his ten years' observations in the central jail of Freiburg, in Baden, which contains an average number of about four hundred prisoners, most of them undergoing short sentences, rarely over two or three years. A considerable number were in prison for the first time. The system of solitary confinement in cells is here in use. Dr. Kirn found that the yearly percentage of those who fell insane to the other criminal inmates was 2·7 on the admissions. He tells us that in Hanover this percentage is 3·2; in the kingdom of Saxony, 3·2; in the penitentiary of Baden, 3 per cent.; in that of the province of Saxony the same; and in the prisons of Scotland, 2·3. Thus the percentage of the insane in asylums is at least ten times higher than it is in the overhead free population. Altogether, 129 lunatics fell under Dr. Kirn's observation, though there were many more on the borders of mental derangement. Acute attacks of insanity are common. Dr. Kirn illustrates his paper by a large number of cases, which we cannot reproduce. Here is his description of what he calls the delusional insanity of criminals (*Verbrecherwahnsinn*).

The subjects of this disease are criminals who, through inherited or acquired predisposition, possess a weak and impressionable brain. Their previous history shows them to have been fond of pleasure, afraid of work, living between excesses and privations. In most cases repeated imprisonment has had its influence upon their character. Besides the constraint and privation, the insufficient nourishment of the brain is to be considered. Owing to this, there is

a one-sided activity of consciousness with concentration in certain directions. After the initial symptoms of headache, giddiness, and sleeplessness, comes a mental irritability, frequently with melancholy and refusal to work. This condition becomes worse through disciplinary punishment. Hyperæsthesia of the organs of the senses follows; the ear accustomed to absolute silence becomes more and more sensitive; finally, through the anæmic condition of the brain, delusions and hallucinations appear, at first of an elementary character, followed in time by loss of judgment and reasoning power, then by maniacal excitement, provoked by the want of recognition of their diseased condition and the discipline of the prison.

By proper care and treatment, under favourable circumstances, the further progress of the disease may be arrested. But if this does not succeed, or if the condition still remains misunderstood, it continues. The daily recurring hallucinations of hearing, to which hallucinations of all the other senses may be added, influence the consciousness more and more, and become a fruitful source of delusions. Then follows a stage of fixing and systemizing these delusions. The result generally is a condition of delusion of persecution (*paranoia querulantium*), which is frequently accompanied by periods of great excitement, with violent behaviour. Later on there are often insane delusions of grandeur. At this stage the malady has come to its full height, and is as a rule incurable.

4. *Russian Retrospect.*

By ROBERT JONES, M.D.Lond., B.S., F.R.C.S.

A Visit to Asylums in ST. PETERSBURG, MOSCOW, NIJNI NOVGOROD, and WARSAW.

A long looked-for trip to Russia became at last possible, and during my visit I made an inspection of nine lunatic asylums, both public and private, which may be taken as fair examples of other institutions for the treatment of the insane in that country. Each province in Russia has one or more asylums, within or near its chief town, and each province is responsible for the maintenance and government of its own asylums; the general management of the latter depends, therefore, upon the interest maintained in them and the discipline enforced by the governing committee. The difficulty which a foreigner, unacquainted with the language, has in appreciating the details of management is naturally very great, and, I fear, if it had not been for the notoriety of Russians as linguists, fully justified in my experience, the information I obtained would doubtless be unreliable. I found that many of the Russian medical superintendents were travellers, and that England had been visited, that the

asylums of Bethlem, Colney Hatch, and Hanwell had been also visited. They all (in the nine asylums inspected) spoke French fluently; two ventured to speak English, but they expressed themselves more correctly in writing. All seemed aware of the difficulties of English pronunciation, and were aware of the treachery that existed in applying general principles to our complex language. Although I was favoured with photographs and plans, statistical, structural, and medical reports of these asylums in the Russian language, I fear that I have not profited much in the following account by their possession; what I have to say being mainly from notes made during my visits.

ST. PETERSBURG.—At St. Petersburg I visited the four asylums. 1. *Nicolai Tchoudavorets*, or St. Nicholas the miracle performing, is in the middle of the town, close to some extensive ironworks. It is a large, dull, dreary, dark, and dismal building of three and four storeys, and is distinctly visible from the Neva. It was formerly a great prison; its use as such having been discontinued for over 12 years. The approach to it is by ill-paved, roughly cobbled roads, each cobble seemingly set (as is characteristic of the Russians) with the wrong end upwards, and over which the *isvostchiks* drive their *droskis* regardless of shaking and jostling. Entering by an imposing double-lodged gate unchallenged, I passed through a courtyard, and, ringing a bell, was ushered into a spacious apartment on one side of the lofty entrance hall, which was flanked on each side by a stone staircase leading to a balcony, whence access is obtained to the main wards on the first floor. At the level of each floor is spread a strong rope-netting across the well of the staircase as a precaution against accidental or suicidal falls over the banisters. In a specially-arranged section of this asylum are excellent medicated baths—electric, Turkish, Russian, etc. Dr. Tomaschewski, who has written upon and worked at epilepsy and the pathology of hallucinations, has recently translated Dr. Ireland's work on "Imbecility" into Russian. He, in company with two of his colleagues (one a lady doctor), showed me over the asylum, and I was much impressed with their earnestness of purpose, their interest in the patients, and their genial kindness to all around. I feel sure that among the educated Russians the characteristics of the nation so eloquently described in a contemporary are greatly overdrawn. In this asylum there was overcrowding, also deficient light and ventilation (the windows were double), and a total absence of what we in England describe as home comforts and domesticity; a general want of æsthetic and humanizing surroundings; no pictures on the walls, no books or newspapers in the wards, no birds, no pets to be seen; but the asylum was clean, the floors in excellent condition, being painted a drab or light-fawn colour and varnished, giving them a pleasantly clean appearance. The clothing I considered very indifferent, some patients without shoes or stockings; true it was a Russian summer, and the heat during the day is often very great. No occupation is found for

the majority of the patients of either sex. As against the absence of books, papers, pictures, and pleasing surroundings, must be set the ignorance of the Russian lower classes (only 12 per cent. of whom can read), their slovenliness, their careless, indifferent habits, and their total disregard of the æsthetic. As to the general tone of the wards, the patients were very quiet, there being less noisy talk on the female side than is usually observed in English asylums. The Russians are essentially quiet, even Russian crowds being sober in their behaviour, silent and deferential in their manner and bearing. What a contrast to the Saxon or Celtic holiday gathering! This asylum labours under very great disadvantages as to recreation owing to its situation in the middle of the city. The outdoor space is cramped; the *airing courts* deserve the name, for they are only little strips of path, with no green, and scarcely larger than the wards. The staff were numerous, but wanting in smartness; no uniform is provided, and it is difficult to distinguish the attendants from the patients. The forms of insanity mostly to be met with are melancholia, alcoholic insanity, and epilepsy among the men, general paralysis not being common. The women suffer largely from the nerve psychoses—allied forms and modifications of hysteria and hystero-epilepsy. There were under treatment during the year 234 males, 166 females—a total of 400 in this asylum.

2. The next asylum visited is at the tenth verst, about eight miles on the road from St. Petersburg to Peterhof, and is under the able superintendence of the most genial Russian doctor, M. Tscheremschansky, who, in company with his three assistants (one of them a lady doctor), escorted me over the whole building. This is the model asylum of St. Petersburg, being a moderately recent building of brick, covered with stucco to represent stone. It is regularly built, well equipped, and has in its superintendent, Dr. Beliakoff (who in his writings quotes Dr. Clouston and the West Riding Asylum Reports), Dr. Biaskoff, and the lady doctor, Borosdina Rosenstein, energetic and skilled pathologists. Microscopy and physiological chemistry are earnestly studied, this being the acute asylum and the chief teaching school in the specialty for metropolitan medical students. I was very pleased with it. The medical superintendent writes and speaks English well. He is intimately acquainted with the names of Tuke, Savage, Clouston, Maudsley, and Bucknill, and is evidently interested in the bibliography of his specialty. This asylum is called the Hospital of our Lady of the Afflicted (*Hôspice de Notre Dame des Affligés*); it is capable of accommodating 250 to 300 inmates. The main plan of the building is arranged as three sides of a square, being open at the back. The front is given up to administrative offices, laboratories, chapel, etc.; the two sides for male and female patients are unequal, the former, on the left of the main entrance, having at its further end a spur, connecting it with another group of buildings arranged like three sides of a parallelogram. The entrance hall is large, the wards are roomy, the single rooms lofty, and the various

offices partake of the usual extensive Russian scale. The main wards, it should be stated, are formed out of a long corridor in the very centre of a block, which is divided lengthwise by two partitions into three compartments, the middle one, a passage, being used as day rooms, and those on either side as dormitories, single or associated, according to their size. It will be seen that the light in the day rooms must be borrowed, except at each end, or as occasionally happens when one or more side rooms are added to the corridor ward, forming alcoves, which considerably improve the lighting and add to the comfort, but the complaint already made against the appearance of the wards in the first asylum holds good here—they are too bare, bleak, and cold looking, certainly free from any imputation of domesticity. The patients, a very rough-looking lot—but generally quiet—mostly dine in their own wards, and live plainly, but abundantly—soups, good meat, vegetables, black bread, weak (save the mark) tea, and *kwas*, a liquor fermented from rye or fruit, being the usual carte to select from. The Russian *kwas* is a thick, unpalatable-looking drink, not unlike our beer, although much weaker; the average Englishman certainly prefers something stronger, but after several tentative efforts at its ingestion one grew to like it. Baths are not too abundant, but there is a very good swimming bath in a shed on the grounds, which I understand is in frequent use by the patients in the summer months. Fire stoves are arranged near the baths; in the winter months they are used for warming purposes, and are capable of giving out abundant heat; hot water coils are also abundant. The Russian stoves are a specialty. They are built of brick, lined with glazed tiles, and consist of a fire-place communicating with a long series of quadrangular flues, ending in the chimney; often they are so contrived that one stove will heat two or three rooms. The fuel is wood, and once the wood is kindled the small iron door is shut, and the fire is not seen, but felt; the temperature (which can be modified by means of a damper) may easily be raised to 77° or 80°. Coals are scarce and very dear in Russia; transshipment is also expensive, and the winter is long and trying. It is, therefore, a wonderful and wise provision of Nature that wood is so abundant; in fact, Nature provides more wood than can be burnt as fuel or used for industrial purposes, there being unbroken belts and territories of birch, fir, poplar, and alder; and the oak is also abundant. Owing to the flatness of the country it is difficult to get a sufficient fall for sewerage; a system of earth and water closets is, however, in vogue. The bright and extensive gardens and recreation ground for the patients are all that can be desired. They are well wooded, there is an abundance of green grass, the paths are good, clean, and dry, and there are plenty of seats. A large farm is tilled; the soil is sandy and fairly good, and there is proper employment for the inmates. Generally this asylum is clean, in good order, and free from smell; its condition reflects credit upon the management. A most unfortunate incident occurred as we were going through the

refractory ward. As was his custom, the genial superintendent listened to the complaint of every patient himself. A determined-looking male, of fine, muscular build, requested an interview, and after a few minutes' quiet *tête-à-tête*, suddenly, and with the impulse and strength of a lion's paw, struck the doctor with open hand on the face, bruising the left eye and cutting his cheek terribly. Help was at hand, but the catastrophe was too much for the lady doctor, who almost swooned and was overcome. After an interval the chief was removed home, and we continued the visit in his absence. He had our full sympathy. We were prepared to sacrifice further inspection, but at his request we carried our round to its conclusion.

3. The third asylum visited was distant about 15 versts from St. Petersburg, in a northern direction. The drive in a *drojki* with a fast-trotting, small horse, in Russian fashion, was very pleasant and picturesque. Crossing the Neva over the *Troitski*, a wooden bridge, and driving through the well-wooded islands in the Delta, studded with pretty villas, whose lawns slope down to the water's edge, one could not but feel that Nature had liberally compensated the natives for the long and cold winter by giving them so rich, luxuriant, and delightful, although shortened a summer. This asylum, quite in the country, has a very indifferent approach, and is certainly not meant for frequent visiting, the branch road leading to the main entrance from the public roadway being so channelled with deep ruts that the wheels at times sunk up to the axles. All this made very little difference to the *drojki* driver, but his fare had to cling tenaciously to the seat and other parts of the vehicle to avoid being projected outwards. The experience was certainly unique, and reminded one forcibly of that jerky locomotion on the back of a trotting camel. The asylum at Udelnaya, a small village on the Finland Railway, is called St. Pantheleymōn, and is capable of accommodating 600 patients. It is an establishment for chronic cases, of both sexes, and it is truly a colony, for an amount of liberty is practised here which I have never seen in England, Wales, or Ireland, and the non-restraint shibboleth, as here understood, would cheer the heart of the most theoretical Scotch superintendent. There are no locks or locked doors by day, no airing courts, and no separation of the sexes when out of their wards. The male and female wards are arranged on the block system. The blocks are one-storeyed, and built entirely of timber, with caulked joints; they diverge from a common centre, being arranged along a semi-circle; the diameter of the semi-circle, a high hoarding of timber, forms the front (main entrance) boundary, the space between this and the ends of the blocks being the semi-circular garden, which is common to both sexes. As is usual, each block (one floor) is partitioned off into three divisions, the middle being the day-room (mostly with borrowed light), the lateral ones being dormitories—single and associated. The bedding was clean, but coarse; the appointments generally were crude, but the patients

seemed comfortable and happily resigned to their surroundings, fond of their attendants (a feature not generally marked in lunatics), and quietly contented. From my experience in this asylum, I believe sincerely that there is a something—sexual polarity, call it what you will—which soothes and civilizes the lunatic when allowed to meet the opposite sex. Many of us have noticed the soothing effect which attendance at winter dances has upon those patients who are thus allowed to meet and enjoy a little natural conversation in a microcosm of their own. It is my belief that many attend dances who are not dancers, and even for the matter of that chapel, to enjoy that companionship which is instinct in mankind. I cannot but feel that advantage would be obtained in the treatment of the insane if, with discretion, judgment, and due supervision, the sexes were allowed to meet oftener, as at meals, etc. The supervision at St. Pantheleymōn is very thorough in the joint recreation ground, and the superintendent informed me that the privilege was not in any single instance abused. The various offices, the inspector's lodge, the attendants' common room, overlook this garden, and the watchfulness of the staff, constant as it is, to a great extent is painlessly indirect, rather than painfully and obtrudingly direct. The staff wear no uniform; their manner to their superiors is deferential to a degree; the loyal Russian looks upon respect to his superior as a bounden duty and a creed. The male attendants appeared to me young. They were kind, and seemed to mix with the patients freely and without restraint; the latter were not complaining either to the superintendent or, as is often the case, to a stranger. The female staff is recruited mainly from the foundling hospitals, the little girls when grown up being compelled to serve as nurses, sisters in hospitals, midwives, lunatic attendants etc., whereas the boys become available for military service. It is a curious moral perversion that devoted and "holy" Russia should consider it right to sustain at vast expense to the State these foundling hospitals, which succour the illegitimate, more often than not, at the expense of the legal offspring. The sight of these vast nurseries in St. Petersburg and Moscow would afford instructive materials for reflection to the student of social science. The management of the asylum at Udelnaya devolves upon Dr. Tschish, who is assisted by four colleagues. He is a very young man, of active, energetic, and earnest temperament, who is evidently esteemed as a true worker in the specialty, as his portrait figures among a group of eminent Russian psychologists, which I saw in various asylum offices. At my visit there were resident here 334 males, 171 females—a total of 505.

4. A short distance from St. Pantheleymōn is the Royal Asylum of the Emperor Alexander III., built as a home for insane patients of the middle and upper classes who are unable to afford the higher payments of single charge. State servants, those employed in civil (theatrical and various Government offices) and military occupations, find a home here, and the funds of this asylum, depending as they do

upon Royal favour, appear to be in a very satisfactory condition. The medical superintendent, Dr. Dmitrieff, has held office for many years, and he is decorated with several orders, being evidently a *persona grata*. This asylum is encircled with very picturesque surroundings—the gardens, paths, and outbuildings all showing that this institution is something beyond the usual run. Comfortable drawing-rooms are found here; pianos, pictures, books, birds, aquaria, etc., point to the fitness of things—in fact, everything that tends to cheer the depressed, afford rest to the weary, and sustain the flagging energy has existence here. This is the first asylum that I visited where anything like occupation is provided generally for the patients—carpentering, turning, upholstering, tailoring, etc. A special feature of this establishment is a school for imbeciles. There are about thirty children receiving instruction and training here. The appointments at this asylum are satisfactory, and the medical superintendent is quite prepared to test any innovation not conjectural for the benefit of his patients. Electric light is used within and without. The chapel in the grounds is considered unusually elaborate for an asylum chapel, but divine worship as carried on in Russia is so full of ritual that I am not able to enter into it here. Several of the *ikons* were richly jewelled. My visit to this asylum was altogether a pleasant surprise. It is capable of accommodating 250 to 300 patients, and the detached houses in the grounds are much in the style of Swiss *châlets* elaborately ornated.

Moscow.—My next visit was to the asylums of Moscow. Whatever may be said of St. Petersburg, it is not a genuine Russian town; it may be German, or it may be Belgian or French, or even English, but it is not Russian. It is only when you arrive in Moscow, with its gilded cupolas, its coppered green roofs, its whitewashed houses, its bazaars, and its essentially Eastern habits, that you really feel yourself to be in Russia. A strong feeling exists against St. Petersburg among the Muscovites, owing to the removal of the Court, with all its attendant ceremonials, to that place after the time of Peter the Great. The first of the asylums inspected was the large private establishment owned and managed by Dr. Savei Moquelevitch. It is well situated towards the southern outskirts of Moscow proper, near the convent of Novo Devitchi, and is included within one of the extensive curves of the river Moskva. The grounds of this asylum are charming; the gardens, promenades, drives, and sheltered nooks, the fountains, the pretty verandahs of the various private houses, which are separate establishments under one administration, combine to reflect credit upon the excellent management which has pervaded this hospital with an air of luxury. I had the pleasure of dining with the doctor and his select patients, several of whom joined his table. Even here the inevitable pumpkin, or gourd, comes up, which all who have travelled in Russia are familiar with. We were at this table an international collection. One lady had

spent much of her time in England ; a French Count had been long resident in Moscow ; a nobleman hailed from Astrakan ; and the home service was represented by a Russian General. Conversation was necessarily limited, being in a foreign language, French, the language of diplomacy, being our common ground. The Russians, clever linguists as they are, compensated fully for my own deficiency, and the kindness shown to me gave me confidence amidst novel surroundings. In this asylum (plans and photographs of which were supplied) everything that modern science and western art could do for the afflicted was carried out. Cleanliness, kindness, freedom from restraint, amusements, and, above all, a genial, sympathizing manager—from whom the tone of the establishment was taken—were pleasing impressions. Lawn tennis has not yet caught the Russian mind, except as a trying and unnecessary muscular exertion, but croquet is much in vogue. Horses are kept for the use and recreation of the inmates, there being carriage exercise in summer and sledging in winter. A farm is rented by the medical superintendent for the supply of the usual produce. The patients pay sums varying from 10 roubles (£1) to 50 roubles (£5) per week, according to requirements. I went over the whole of the asylum according to the plan before us, and spent most of the day with the officers and patients. I was struck with what was done for the general comfort. The appointments in the various houses were excellent, and left little to be desired. Dr. Moquelevitch, indeed, has his heart in his work. He accompanied me over (2) the *University Clinic*, where there are about 50 lunatics, under the charge of Professor Koshevnikoff and four assistants. This is the acute asylum for Moscow. The buildings are not unlike Wellington Barracks without the square in front—plain, but two-storeyed, ugly-looking rather than pretty—substantially erected in a costly manner, with very thick walls, abundance of light and loftiness, the rooms all over sixteen feet high. Special precautions have been taken to render the structure (built of bricks, faced with cement, and in shape like three sides of a parallelogram, with a spur at right angles to each end outwards) fireproof, there being a vaulted brick roof to each room, with iron girders, over which is laid the wooden floor of the room above. The blocks are divided into two unequal parts, longitudinally, like the old wards of Bethlem, only there are sash windows in the day rooms almost to the ceiling ; the divisions serve as corridor-ward and dormitories, mostly single rooms. The doors are very substantially made, and the fittings good. They might be hammered and beaten all night without much noise. The padded rooms are lined with thick, well-tanned hide—leather being comparatively cheap in Russia. The heating must have been complex, and the architect and engineer had evidently met and worked together in this building. Usually no proper, economical, and, at the same time, scientific provision is made by the architect for heating large buildings until after or near their completion, with the effect that you get an

icy draught in one place and the heat of the tropics in another. Warmth is obtained from furnaces in the basement, cold air (entering through large tunnels from the outside) becoming heated, and then carried through tubes in the walls to the various rooms above the doors. The vitiated air of the wards is extracted through inlets on the level of the skirting, and carried also in the walls to the highest points, where they are protected. All the woodwork is painted and varnished, the colour being a light stone. Mechanical restraint is rare, more so than in French and Italian asylums for similar patients. The strait-waistcoat is the method employed. The fault already referred to in regard to other asylums, viz., a want of homeliness and domesticity, is shared here. Very little furniture, except benches, tables, and beds, is seen; tin plates for dinners, tin pannikins, and much slovenliness might be remedied. The meals I considered execrably served. No pictures in the wards, no variation in the colour of the rooms, no books or newspapers to while away the terribly long and weary hours. If ever surroundings influence a mental condition, detention for treatment in such an asylum ought to render a victim hopelessly incurable. The airing courts are cramped and small, a high wooden hoarding shuts you round, and no glimpse is got of the outer world. A larger airing court beyond this is, I believe, used for some patients, and a still larger one with gardens, beyond this, apparently for three classes of patients, but they were unoccupied during my visit. It is probable, as in the University Clinic of Berlin, that other patients, not affected mentally, use the more extensive grounds, the poor lunatics being hemmed into a pen. I thought it were better to die than to linger in such a place. The attendants in this asylum are numerous, but they looked young, inexperienced, and untidy. On a summer afternoon, pleasantly warm out of doors, all the patients were indoors. Such a state of things would hardly be the case in England. I did not see any female patients, and, if I remember rightly, I do not think there were any. Fortunately for the inmates, there were far more vacancies than inmates. I was informed that there was accommodation for 98 males and 88 females; total, 186. No suicides had occurred, but the normal mortality is high. A good physiological and pathological laboratory is a great feature of this asylum. 3. The third asylum visited in Moscow lies in the northern suburbs, about six miles from the Kremlin, in the neighbourhood of Sokolniki, where there is an extensive "People's Park." It is called the Préobrejanski Lunatic Asylum. It is in three distinct sections; an older building, with two not very modern annexes, the oldest portion not unlike a monastery. Possibly from the same causes that operate in England (increase of registrable insanity), the old asylum has been added to from time to time. A medical superintendent is here in charge with four assistants. There are 400 patients (229 males and 171 females); 40 epileptics (30 males, 10 females); 20 general paralytics (12 males, 8 females—a great contrast to general paralysis in England). Light

and ventilation were scarce, the clothing was indifferent, and there was an air of easy-going administration, incompatible with health, comfort, and proper cleanliness. Much freedom was seen everywhere, amounting even to laxity; the male patients were allowed free entrance into their dormitories, and lounged carelessly on their beds, smoking. The dormitories and the bedding were therefore unsatisfactory—not unclean, but untidy. Classification was unsatisfactorily carried out, some noisy demented interfering with the comforts of others. Easy and apparently unrestricted access was obtained to the bath-rooms, which were not over-clean. The baths were sunk into the floor. The attendants were untidy, but extremely deferential and courteous. The staff (medical and otherwise) suggested under-pay and want of personal vanity—general indifference to outward appearance, etc. As an example of the easy-going routine of this sleepy hollow may be mentioned my entrance. I passed the *conciergerie* unchallenged, found my way into a courtyard or garden, entered by a door, ascended a series of steps, yet without meeting anyone, walked across a lobby, and into a female ward, retraced my steps, and descended in another direction, to find myself opposite a shrine or chapel, with a series of ikons and rays. Passing out through another door, I seemed to be entering a second ward, where, thanks to the kindness of a sympathizing inmate, I was at last able to find the medical staff, four of whom were at lunch, waited upon by two hungry-looking patients. I was unable to procure a report or plan of this asylum. Possibly neither was to be had, considering the varying age of the asylum, or, as may also be possible, the disturbance caused to digestion by my sudden appearance on the scene taking this form of vindication. A few notes and sketches, however, made immediately afterwards, helped me (with what I saw) to form an opinion upon the management. The grounds for exercise were very limited. Tobacco was given to patients for helping in the industrial ward work.

Between Moscow and St. Petersburg, near TVER, is the village of Bourashevo, where an excellently arranged asylum for 430 patients, under the charge of Dr. Litwinoff, was recommended for my inspection, but unfortunately I was unable to avail myself of the introduction. From Moscow I travelled to NIJNI NOVGOROD, and completed the studies and sights of the great international fair by a visit to the lunatic asylum. I experienced much difficulty in getting a view of this establishment, and had it not been for the kindly interference of English residents I should have been unable to gratify my ambition in this respect. There is at Nijni an arrangement which I had not hitherto met with as regards the insane. Walking through the town proper, after spending a day at the great fair, I chanced to pass several barrack-looking blocks abutting on some of the by-streets towards the outskirts of the town. My desire to have a peep became all the more urgent when I listened to the curious, unnatural noises

emanating therefrom, shouting, scolding, praying, singing, boisterous laughing, and plaintive wailing. These I considered somewhat phenomenal, and I looked for a lodge-gate, passed through, and soon entered a ward, repeating this performance in two or three other similarly noisy blocks at various distances. In none of these separate blocks did I encounter a medical officer—at any rate, not to my knowledge. Most of the patients confined in these domains were harmless chronic, but frequently noisy cases, such as are often met with in the larger workhouses in England. The asylum proper at Nijni is a modern building, containing 234 patients (156 males, 78 females), and is in charge of two medical directors, one for each division of sexes. As it unfortunately happened, neither superintendent was resident, and the layman in charge (whose duties were those of acting clerk and steward) could not admit me without medical permission. Through the services of an attendant, kindly allowed me as escort, we set off to the two superintendents' houses, neither of whom was in, and here came the help of our English friend, a lady, long Russianized by residence and marriage, and the mother of one of the superintendents, who courteously furnished me with the necessary permit. Everything was clean and in good order, the grounds were extensive, occupation was found for the male and female patients, and there was general attention and kindness. Some very maniacal patients were seen here, which is the receiving bureau for all the lunatics of the district, and whence, after a certain interval, the chronic cases are drafted into the blocks referred to. It is a grave responsibility to allow the pleasant clerk and factotum to receive the admissions, as happened during my visit, in the absence of both medical officers, and to find these cases translated into padded rooms, according to the opinion and judgment of our friend, was in my mind wholly unjustifiable. The two superintendents, living outside the asylum, make periodical visits, and are allowed private practice. This also, in my opinion, was a highly anomalous procedure in an acute asylum, where the medical staff, relatively to other institutions, appeared to be greatly undermanned. In the blocks above referred to (I cannot say whether in all of them a medical officer resides, for I saw none, but was informed, after my visit, that there were such) a much more wholesome indifference to discipline is observed than in any asylum hitherto visited.

At Kazan, two days' journey towards Astrakan, down the Volga, there is a newly-constructed lunatic asylum, on the most approved plan, but I regret that I had no opportunity to inspect it.

WARSAW.—My last visit was to the asylum, *St. Johannes à Deo*, for 200 males, in Warsaw, the capital of the ancient kingdom of Poland. This institution is managed by an elderly superintendent and two elderly colleagues, with the result, probably, that the administration was not of a very energetic nature, much being left to the attendants, who, in most cases, appeared to justify the trust placed

in them. This is one of the oldest asylums visited, and, like the city in which it is situate, seems to have a halo of departed glory about it. Warsaw has seen better days—its Royal Palace is now the barracks for Russian troops. In this asylum there was insufficient light; all the windows are barred. The rooms (scarcely wards) were low and close, cheerless-looking, with worn-out furniture; the bedsteads in the dormitories were wooden, and had loose straw for mattresses. Some restraint-chairs were also seen here, but were not in use at the date of my visit. Patients are secluded, and, I believe, restrained without previous medical permission. The bath-rooms were dingy, and the floor was stone, cement, or hardened earth, with a boiler (unprotected) in one corner for supplying hot water. The baths are sunk in the floor. The airing courts are small; the patients pent up and hemmed in by a high wooden palisading. There are no paths, the whole of the court being tracked, while the only shelter from the sun is furnished by a few lanky trees, such as poplars, birches, or acacias. Private patients are received here, and have a somewhat better accommodation than the others. I was much indebted to a chronic patient, who was cosmopolitan in his sentiments, for pointing out everything of interest in the patients or their surroundings, while they not infrequently looked upon him as one of the great among men. He was most useful to me (as the medical officer, who was free to escort us round the asylum, could speak very little French), appearing to be quite conversant with the general principle of treatment in this awful and cheerless old building. He was employed as assisting clerk in the medical superintendent's bureau. A new asylum in process of construction, about four miles by railway from Warsaw, was, owing to my limited time, not inspected. Women are treated in a section of the *Hôpital de l'Enfant Jesu* for general diseases, and number about 200.

PART IV.—NOTES AND NEWS.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The Quarterly Meeting of this Association was held on Thursday, the 13th ult., at Manchester. The members assembled in the Chemical Theatre at Owen's College, Dr. Newington, President, in the chair. There were sixty-three members present, including the following gentlemen:—Drs. Fletcher Beach, R. Baker, T. N. Brushfield, D. Bower, Crochley Clapham, David M. Cassidy, E. Marriott Cooke, L. F. Cox, J. W. Stirling Christie, T. S. Clouston, B. Fox, L. Francis, R. W. Hewson, W. S. Kay, S. Rutherford Macphail, G. W. Mould, J. G. McDowall, W. R. Nicholson, Evan Powell, Sutherland Rees Philipps, T. L. Rogers, G. Revington, Ross, E. L. Rowe, G. E. Shuttleworth, Geo. H. Savage, J. B. Spence, George J. Swanson, Percy Smith, T. S. Sheldon, Strahan, Hack Tuke, C. Tuke, A. R. Urquhart, Joseph Wigglesworth, John A. Wallis, E. Whitcombe, D. Yellowlees, etc.

The PRESIDENT—Gentlemen, before we commence the strictly scientific

portion of the business, we have a little routine work to do with regard to the election of members. There are eight names submitted to you for election. While the ballot is being taken I wish to mention that it is proposed to place before you for election as Corresponding Members two celebrated foreign psychologists. It is not usual to put these names to the ballot. The Society has hitherto been good enough to rely upon the Council with reference to the selection of its Corresponding Members. Their names will be submitted to you by Dr. Tuke.

Dr. HACK TUKE—Before proposing the names of these gentlemen, who I believe you will admit are in every way suitable for election, I should like to refer to the loss which the Association has sustained with regard to three of its Honorary Members, namely, Dr. Nichols, of New York, Prof. Westphal, of Berlin, and Prof. Leidesdorf, of Vienna. They were three excellent men, and their appointment as honorary members reflected honour on our Society. Dr. Nichols was in England, as many here will remember, in the autumn. He was then engaged in visiting asylums in Europe with the view to the erection of a new asylum in the neighbourhood of New York. We all felt at that time that his health was in a precarious condition, and that he was undertaking a work which at his time of life was scarcely judicious, exposing him as it did to so much labour and fatigue. Shortly after his return to New York he died of carcinoma of the stomach and liver. I am sure that those who met him in England will remember him with affection and respect. With regard to Prof. Westphal, his name is so universally known that it is quite unnecessary for me to say a word. Those who knew him personally, as I did, and have seen him in the Clinique of the Charité of Berlin, will remember how modest and unobtrusive he was, notwithstanding his distinction and the knowledge and experience that he had. It is a little remarkable and very sad that he should himself have succumbed to that form of insanity, general paralysis, which he himself had done so much to illustrate. With regard to Prof. Leidesdorf, of Vienna, he was a man who wrote well, lectured well, and was held in the highest esteem. Some of his works are of great merit, and there is one of his articles which bears on the subject to be brought forward by Dr. Ross, a paper written a good many years ago, on the sympathetic relation between the disorders of the peripheral nerves and the central organ of the brain. I am sure that we all feel that we ought to make some reference as an Association to the loss Medical Psychology has sustained; and in accordance with a suggestion made at the Council, I beg to propose that an expression of our regret at the loss of these distinguished men shall be entered on our minutes.

Dr. YELLOWLEES—I will second that with great pleasure.

The resolution was unanimously adopted.

Dr. TUKE—I will, then, proceed to propose the election of these two gentlemen as Corresponding Members, namely, Dr. Régis, of Bordeaux, and Dr. Ritti, of the Maison Nationale, Charenton. I came across a passage the other day in a speech of Dr. Conolly's, at the Annual Meeting in 1860, which is so much to the purpose that there is no need to apologize for reading it. He said, in proposing a rather long list of names to which some objection was made, with regard to the number at one time, "It appears to me we ought to endeavour to carry out the feeling that has lately prevailed, by associating as much as possible our enlightened neighbours of the great country of France with ourselves. So far as our small influence can go, we might show that there are nobler feelings existing between the two countries than any of those which our military preparations might lead us to fear." That shows a very fine feeling, I think, on the part of Dr. Conolly, and I trust it will be generally felt at the present day. Dr. Régis is the author of many works on psychological medicine; he has written a large number of excellent articles, amounting to twenty-five, and he is Corresponding Member of the similar societies in France and Belgium; he is Professor of Medical Psychology in the University at Bordeaux. I hope, therefore, you will agree with me that he is a suitable candidate for election as

Corresponding Member. Then, as regards M. Ritti, he is the co-editor of the "Annales," and he holds the office of Honorary Secretary to the Société Médico-Psychologique in Paris. He also has written a great many able memoirs, and, therefore, I think you will say that he is a very proper man to become a Corresponding Member. I should say we have at present only three Corresponding Members, although we are allowed to have thirty. Seeing, therefore, that if these two gentlemen are elected the number will only be five, I think it is not too much to ask that you should add them to our roll.

The resolution was carried by acclamation.

The PRESIDENT—I have to announce that the ballot for the eight ordinary members has been successful, and they are hereby declared to be members of the Medico-Psychological Society.

WILLIAM GILMORE ELLIS, M.D.Brux., Superintendent, Government Asylum, Singapore.

JOHN SPENCE LAW, M.B., C.M.Edin., Junior Assistant Medical Officer, North Riding Asylum, Clifton, York.

ALFRED W. CAMPBELL, M.B., C.M.Edin., Assistant Medical Officer, Salop and Montgomery Counties Asylum.

WILLIAM WOODWARD, L.R.C.P., M.R.C.S., Junior Assistant Medical Officer, Cornwall County Asylum, Bodmin.

AUTON HUGH SYRÉE, M.R.C.S. and L.S.A., Assistant Medical Officer, Wilts Asylum, Devizes.

JOHN JAMES PITCAIRN, L.R.C.P., M.R.C.S., Assistant Surgeon, Her Majesty's Prison, Holloway.

WALTER SCOWCROFT, M.R.C.S., Senior Assistant Medical Officer, Royal Lunatic Hospital, Cheadle.

GEORGE FINDLAY, M.B., C.M.Aber., Assistant Medical Officer, James Murray's Royal Asylum, Perth.

(Paper read by Dr. Ross. See "Original Articles.")

The PRESIDENT—I am sure I may tender to Dr. Ross the thanks of this Society for his very able, and I may say picturesque paper on a condition of which he sees at least half, and most of us only see the other half. I may say that Dr. T. W. McDowall has sent Dr. Tuke a case illustrating peripheral neuritis, and I propose to call on him to read that before any remarks are made on either of the two papers. (See Clinical Notes and Cases, p. 228).

The PRESIDENT—We will now proceed to discuss Dr. Ross's paper and Dr. McDowall's case.

Dr. TUKE—Might I just say with regard to this case that it seems to me that it is highly probable that, considering the pain in the limbs felt in consequence of the peripheral neuritis, and the existence of delusions of that kind which are mentioned with regard to electricity and so forth, it seems to point to a case in which there is reasonable ground for believing that there was a connection between the neuritis and the mental condition. I confess with regard to a great many cases which are mentioned as bearing on psychical disorders and peripheral neuritis that that connection is not clear to my own mind, and in regard to the particular paper which we have heard to-day from Dr. Ross, I would venture to ask whether the title of the paper, "The Psychical Disorders of Peripheral Neuritis," expresses exactly what is the real truth, that is to say, whether they are the psychical disorders of peripheral neuritis or merely psychical disorders which are the complications of peripheral neuritis. It seems to me in so many of these cases that the common cause—alcohol—may have affected the brain primarily. I suppose the great advance which has been made with regard to our knowledge of the symptoms and nature of peripheral neuritis shows that there may be paralysis which was formerly supposed to be connected with the cord and central, but which has been found to be produced by peripheral disease. It seems to me, carrying on that idea to our present subject of discussion, that we ought to have some proof that there is a connection between the peripheral neuritis and the brain trouble. As regards

the case mentioned of a steward, it did not seem to me that there was any association in that instance between the peripheral condition and the mental trouble. With regard to the girl suffering from fumes of naphtha, I do not quite see why the mental trouble should not arise directly from these fumes of naphtha, and why it should be associated in any special way with neuritis. Of course I do not deny that there may be conditions of nerve which give rise to disorders of the brain; it seems natural that it should be so, the wonder to me is that it is not oftener so, yet Dr. Buzzard says mental trouble is a rare accompaniment of peripheral neuritis. One would suppose that in myxœdema, the mental trouble may to some extent be referred to the condition of the peripheral nerves—that the obscuration of mind is in close relation to the break between the peripheral impression and the brain perception. But that does not seem to me to apply to the cases which Dr. Ross mentioned to-day. However excellent his description of the symptoms of alcoholic insanity may be, I should like to have had pointed out to us more definitely the relation between the psychical disorders and the peripheral neuritis.

Dr. CLOUSTON—I am sure we all agree in what you said, sir, as to our obligation to Dr. Ross. His paper has been a very suggestive one. I think one part of the pleasure we have derived from Dr. Ross is this: that he, like many of us, has attempted the definition of a delusion, and that his definition is probably quite as liable to objection as the definitions that many of us have constructed with regard to this most impossible subject. I am sure we are all very much interested in Dr. Ross's account of hallucinations and delusions and illusions. One particular clinical feature which he has perhaps scarcely dealt with is this, that those hallucinations and delusions of the alcoholic sort come on at night more than they do during the day. I think this peculiarity in alcoholic cases is exceedingly marked. I am rather in the habit of looking on all men and all women as undergoing a certain process of dissolution once in the twenty-four hours, going back in the process of evolution with regard to some of their higher faculties. During the night we find as a matter of fact that the difficulty in distinguishing the subjective from the objective is very marked in regard to almost every person, although not subject to disease at all. This is a psychological peculiarity that has not been sufficiently dealt with, that all men perhaps undergo a certain process of dissolution during the darkness. The quotation which Dr. Ross made from the play of *Macbeth* illustrates it very well, and Shakespeare's ghosts and hallucinations all occur at night. With regard to disease, we all know that hallucinations occur in nearly all cases of delirium, from the child who becomes delirious with a temperature of 99°, up to the alcoholic, going in for delirium tremens, who is pretty sensible during the day, but who at night goes back into the characteristic symptoms of delirium tremens. With regard to Dr. Hack Tuke's remarks as to the special connection between neuritis and the mental troubles, my experience is very much that of Dr. Tuke. In ordinarily good examples of peripheral neuritis it is a very striking fact that in a large number of cases of alcoholic and opium neuritis they are to a large extent free from marked mental trouble, and that in alcoholic insanity and in the case of morphinomaniacs, the typical cases to a very considerable extent are free from neuritis. No doubt it stands to reason that there will be in a certain number of cases an association of the two. Why have we any alcoholic cases of insanity with neuritis? Probably the reason is that in these cases we have a hereditary weakness and excitability of the central nervous system and a tendency to disease from heredity, and if *plus* the hereditary weakness we have this alcoholic poisoning, it is a mere accident, an accident the cause of which we do not know, whether the disease becomes neuritis or becomes a psychical disorder. It is very surprising how very seldom we have the neuritis and the psychical disorder crossing, and with Dr. Tuke I would rather be disposed to say that the association was merely accidental, and I would scarcely be disposed to use the term "the psychical troubles of

neuritis." I think where the two co-exist it means probably that you have a brain hereditarily weak, and that the poison that has gone to the various mental centres and the motor centres is affecting both and also affecting the peripheral nerves. Apart from that, however, I am sure we are all very much indebted to Dr. Ross for the paper he has given us.

Dr. SAVAGE—I feel a good deal of difficulty in approaching this subject, quite independently of what Dr. Ross said, that we see more especially of one side and he of the other. I go entirely with Dr. Hack Tuke and Dr. Clouston in the statement that they do not find the very frequent correlation between insanity and peripheral neuritis which we might expect. First of all, we all expect that interference of nerve conduction will certainly alter the psychical state. We recognize fully that under certain conditions of deafness a person becomes suspicious. One has seen more than one case in which, in optic neuritis, due to syphilis, suspicion, doubt, and uncertainty have arisen, and in many alcoholic cases one has also seen the prevailing element of doubt arising, as if in those cases alteration of conduction, alteration in the psychical focussing of ideas, was associated with suspicion and doubt. But, on the other hand, one meets cases in which, undoubtedly, changes have been described as occurring in the peripheral nerves, in which such ideas are rare. Many years ago, at the West Riding Asylum, the state of peripheral nerves in general paralysis of the insane was investigated, and, though peripheral neuritis was not as carefully studied as it is at present, the changes that were described seemed to be very nearly allied to those which are now described and figured as those found in peripheral neuritis, and yet in general paralysis of the insane, with these changes it is extremely rare to find psychical symptoms distinctly related to them. One would say, then, that undoubtedly in some alcoholic cases suspicion has some relationship to the peripheral neuritis. Take, for instance, an example that made me think first of all about it. A man, having been intemperate for many years, came to me with the idea that the workmen were boycotting him, that all the workmen in the shop had determined to get rid of him as foreman, and that as a means they had fixed galvanic batteries under his seat. The constant result was trouble and suspicion, and in the end violence. In that case the alcohol and peripheral neuritis, from which he was also suffering, were interpreted in the way that Dr. Ross has described. It seems to me, however, that there is something more—that there either is a strong neurotic inheritance, or that the alcohol has affected, not only the peripheral, but also the central nervous system. It is, of course, interesting to notice that poisons, such as lead, morphia, and alcohol, will produce similar conditions of the peripheral nerves, and may be associated with similar mental symptoms. Syphilis, I may say, also serves as a good example of morbid development, in which pain passes into imperfectly-received impressions, and develops into hallucinations and delusions, and, of course (bearing out what Dr. Clouston has said), it is not only the peripheral neuritis which causes the effect, but the general environment. For instance, one man who had optic neuritis and interference with the general horizon, having been a horse-trainer and brought up in the midst of suspicion of men in general, and having been used to take the law into his own hands, directly his optic discs became obscured and his sight interfered with he became much more suspicious and violent. And so one would say in the majority of these cases there is not only to be considered the peripheral neuritis, but also the brain which is affected by the false impressions, and whether that is direct or the result of alcohol. One feels at present that peripheral neuritis is on its trial. Everyone is looking out for peripheral neuritis. I would place myself rather in the opposition, thinking that thereby the sure line of truth will be fixed—neither to be too enthusiastic in explaining all the symptoms by peripheral neuritis, nor certainly being in a position to deny that peripheral neuritis has a very definite influence on the production of such symptoms.

Dr. YELLOWLEES—I would like to say two words. I agree with Dr. Savage

in the middle position he has taken, yet it seems scarcely a middle position, because he will agree with me when I say that every one of the mental symptoms enumerated by Dr. Ross is very often found by us in our department of practice entirely without peripheral neuritis, and that he seems to us, from our side of it, to go much too far in ascribing those to its existence and its effects. The other word I have to say is a word for the Highlanders. I am not disposed to believe that every hot-headed Highlander, even if he does like whisky, is the subject of peripheral neuritis. A great many sanguine folks who live further south would also require to be included in this very comprehensive category. But especially for the Highlanders I must say that if we are to include all the hot-headed people and the older sanguine folk as being the subject of peripheral neuritis, then it is a much more extended morbid condition than any of us knew.

Dr. WIGLESWORTH—I would draw your attention to the last case Dr. Ross mentioned. That case seems to have an almost special relation to peripheral paralysis, an extraordinary mental condition in which the individuals imagine, whilst in bed or in their rooms, that they have been for journeys or walks in different parts of the country. I believe that a Liverpool physician was one of the first to call attention to it. I myself have seen one or two striking instances of it; it seems to me to be an altogether peculiar condition. It is a very remarkable thing to hear a man sitting in his arm-chair describe the walk he has taken that morning, saying, perhaps, he has been to Wales or other parts of the country, and describing what he has done, when all the time you know he has never left the room. I do not think that condition is at all common in insanity generally; it seems to have some kind of relation with peripheral neuritis. The question is whether you can simply trace it to changes in the nerves, whether the effect of conduction caused by the inflammation has in some kind of way acted to produce this effect. I have long held the opinion that some forms of delusion are due to change in the nerves, although I may not be able to demonstrate it, and I think some forms of peripheral neuritis furnish us with very good examples of this. I should like to ask Dr. Ross whether he has met with a great many more cases of the kind which he last enumerated, in which there is an extraordinary loss of memory and also an excess of imagination, in which people describe these journeys they have had, when they have never left the room. It seems to me, as far as one can judge from the recorded cases, that that particular form of mental condition is almost peculiar to peripheral neuritis. I do not think I have ever seen any case exactly like it in which there was not alcoholic peripheral neuritis, and if it could be established by further induction that it was peculiar, it would be a very important point to establish.

Dr. Ross—I find myself hardly knowing how to begin to reply. Dr. Tuke and Dr. Clouston expressed some objection to the title of the paper. I have a great objection to it myself, and should have very much preferred to have put it: "The Psychical Symptoms which accompany Peripheral Neuritis." I did not say that they were due to the affection, and I never denied the hereditary matter. I hope Dr. Yellowlees won't think I am wishing to deprive the Highlanders of whisky, nor do I wish to deprive the country of alcohol, but of 500 who are exposed to these poisons a very large number would break down in this way, a much larger number than of those not exposed to the poison at all or only in moderation. In the early stages of mental aberration the symptoms may be only such as might occur without these poisons, but they take the more distinctive features later on. When they come to the second stage, I think they are clearly marked, but they assume the most distinctive features when it becomes the final stage of dementia. I have another case of a man who was a vendor of green vegetables about here, and he also gave an account of how he went out and walked about. He always went out to have a glass of beer, and never could remember the names of things. He had a very limited memory of names of all kinds. He would say he went into a public-house. "What public-house?"

"Oh, the public-house up yonder." He will tell you the direction, where it is. "What do you call it?" "Don't remember exactly; it is the public-house at the corner, and you know it quite well." They are always very facetious and amusing, most of these people, ready to crack a joke about the subject of whisky and alcohol. There is one thing which the case read just now has impressed very much upon my mind, viz., that in asylum practice cases of alcoholic paralysis are comparatively rare. I think Dr. Reynolds will bear me out, however, in saying that at the infirmary we get them by the score; we can hardly keep them out of our beds. Another class of alcoholic cases is that of dilated heart. There is a very curious thing that where you have the most advanced condition of peripheral neuritis the mental trouble is always in the background, or very generally; but when you go to the asylum, to my friend Dr. Mould, I find the mental trouble in the front, and only the slightest possible symptoms of neuritis. You go to the bedside of cases of œdema, dropsy, dilated heart—some die very rapidly, but there also the neuritis of the limbs is in the background. Some people seem to break down by the poison acting upon the higher centres; others break down on the automatic centres of circulation; others by the action of the nerves themselves. It is clear there must be inheritance for one part of the body to be more susceptible to attack than the same parts in other people.

The PRESIDENT—I must again thank Dr. Ross in the name of the Association for his admirable paper, and the opportunity he has given us for having a very good discussion upon this question.

The PRESIDENT—I dare say I shall be allowed by you to ask Dr. Clouston to take back the thanks of the Association for the paper we have just heard from Dr. Robertson. I would invite a little discussion upon it, but I am afraid we cannot give much time to it.

Dr. HACK TUKE—As I have been appealed to with regard to the two passages in "Bucknill and Tuke" which in the opinion of Dr. Robertson appear to be at variance, I may say that I think that on more careful examination they will probably be found in harmony, like the descriptions by the two Apostles St. Paul and St. James, of faith and good works, which although apparently to our minds completely at variance, theologians tell us are in complete accord. (Laughter).

Dr. YELLOWLEES—I am very much impressed by those wonderful pictures, and I rose partly to get a better look at them and partly because I would like to say that No. 1 is by no means necessarily a stage of No. 3. This man No. 1 is angry mainly because he imagines he has some reasons for anger, and No. 3 may be angry or joyous or affectionate in alternate five minutes for no reason which he can realize to himself at all. I therefore say the two conditions are not to be confounded as being the one a stage of the other. We all know how easily acute mania varies from one emotion to the other, and this angry fellow is by no means necessarily in a state of acute mania, but is very much like a man angry from some delusion which he is unable to control. Mental is at the bottom of emotional excitement. I think it is very much a matter of expression and of terminology. We have all learned that in melancholia the excitement may be as wild and as impracticable a mental condition as what we call acute mania proper; and I think it is really much more a matter of terminology than any real and absolute distinction.

The PRESIDENT—I have now to propose a vote of thanks to the Council and Governors and to the Principal of Owen's College for their kind hospitality to us to-day. We cannot do less than thank them for the use of their rooms, and also for supplying so many willing and clever listeners to the two papers which have been read at the request of the Association. I beg to propose a vote of thanks to the governing body of this University for the use of the rooms, and to couple therewith the name of the Principal.

The *réunion* of the Association in Manchester has afforded another proof of the wisdom of meeting occasionally in the provinces. Much regret was felt on account of the enforced absence of Mr. Rooke-Ley. Mr. Mould exerted himself to the utmost to make the meeting a success, and entertained the members of the Association in the most hospitable manner. On Friday, the day following the meeting, a party met at Cheadle, on Mr. Mould's invitation, and visited the Manchester Royal Asylum and the Villas on the Estate. Too much praise cannot be awarded to Mr. Mould for the perseverance, energy, and judgment (to say nothing of his scrupulous regard for the Lunacy Acts and the bye-laws of the Commissioners) with which he has carried out what, in the first instance, was largely experimental, but which has proved in his able hands to be a great success. We are sure that with all who inspected the outlying houses there was but one feeling of satisfaction and admiration, while even those who had visited them before were afresh impressed with the importance of the example which Mr. Mould has set to others engaged in the same work. We only express the sentiments felt by those who examined this remarkable cluster of home-like residences for the insane, when we express the hope that the genial and able director of this institution and of its appendages, will long be spared to continue his labours, and that the system which he has shewn to add so greatly to the comfort of the insane may be extended by other superintendents of asylums wherever practicable.

The dinner of the Association took place at the Queen's Hotel, Manchester, March 13th, the President, Dr. Newington, in the chair, many members of the medical profession in Manchester attending.

LUNACY CONSOLIDATION BILL.

There appears to be no reason to doubt the easy passage through Parliament of the Bill, intituled "An Act to consolidate certain of the Enactments respecting Lunatics," and which has by the House of Commons been referred to a Select Committee. It will be the means of greatly facilitating a knowledge of Lunacy Law. There are 342 clauses, occupying 164 pages.

CORONER'S CENSURE OF A SURGEON.

An insane father in Cambridgeshire killed his two children in February last. Mr. Baldwin, F.R.C.S., of Royston, a Magistrate for the above County, received a telegram from the medical man in attendance, Dr. Kidd, stating that Walter Lawrence, of Litlington, was suffering from homicidal mania, and it was necessary to remove him to the Fulbourn Asylum that day. When he arrived at the house, where he was met by the relieving officer of the district, he found that a policeman had already been, but had not taken any action in the matter. After

consulting with Dr. Kidd, he decided to send the patient to the County Asylum, he having been the recipient of parish relief for some time. Two policemen came to the house, but Mr. Baldwin advised them not to apprehend Lawrence. One of them accompanied him and the relieving officer to the asylum. When the inquest on the bodies of the children was held on February 20th, the Coroner expressed his disapproval of the action Mr. Baldwin had taken in advising the police not to arrest Lawrence, and for sending him to the Fulbourn Asylum. He asserted that no one had a right to take a man out of the custody of the law, and send him to a lunatic asylum.

It appears to us that the law in regard to criminal lunatics before their trial ought to be clearly understood. Mr. Baldwin unquestionably did the best thing for the patient, and if the existing law does not allow of such a course being pursued, it ought to be altered accordingly.

THE ROYAL EDINBURGH ASYLUM FOR THE INSANE.

The annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held on February 24th, 1890, Lord Provost Boyd presiding.

The Treasurer, Scott Moncreiff, Esq., submitted the report of the Managers, which stated that the daily average number of patients during 1889 was 824, an increase of seven on the previous year. The patients in the East House, Craig House, and Myreside Cottage numbered 127. Intermediate class, 132; pauper patients and private patients at lowest rate of board, 565. The cost of maintenance of pauper patients per head for 1889 was £31 8s. 8d., being an increase of 9s. 2½d. upon the cost per head for 1888. For the erection of the new asylum the managers have accepted tenders amounting in all to £65,494 6s. 5d. Negotiations with the City Parochial Board, in order to acquire the summit of Craigmackie Hill, have been successful, and there is no danger of the new asylum being overlooked from that quarter.

The LORD PROVOST moved the adoption of the report, and observed that last year they were somewhat at issue with the Corporation of Edinburgh, in regard to the proposed additions to the grounds where the new house was being built. At that time they were only contemplating proceedings, whereas now they were fairly launched on the scheme. It was very gratifying that the only obstacle had been removed by the Corporation giving way in regard to the eastern portion of Craigmackie Hill. In concluding, the Chairman referred to the eminently satisfactory character of the official report upon the Institution, and expressed the indebtedness of all who were interested in the asylum to their physician-superintendent, Dr. Clouston, and to the medical gentlemen who acted along with him.

The report was adopted.

Dr. CLOUSTON, in his report for 1889, stated that the admissions were 323, the total number of patients under treatment having been 1,149; the discharges were 248, the number who died being 77. From 1875 to 1879 the number of admissions of patients over 70 was only 47, while during the last five years it was 69, an increase of 47 per cent. of senility. It was this class of patients that reduced their recovery rate, for under the care and diet they got in the asylum their life was greatly prolonged. He had long maintained that certain forms of mental disease were scientifically a sort of premature death of a portion of the brain, while the rest of the organ and the body lived on and did their lower functions; the practice, therefore, of treating active insanity and dotage in the same institutions seemed to rest on a certain scientific basis, however inconvenient its practical results might be. After showing that sanity

was self-control, Dr. Clouston said three things seemed to him to make for mental breakdown in model civilization, viz., the number and variety of men's cravings, which represented their needs; the complication and strength and "inhibitory" powers required to regulate and control these cravings; and the frequent tendency of the cravings and desires to mistake their real objects. . . . It was of the nature of alcohol in every shape and form that it had a special affinity to the brain, that it created a desire for itself, and that desire led to ill, and was, therefore, the nature of desire. It created an artificial need and a craving to supply that need. The need and the craving which nature conjoined for the good of the organism were in this instance changed in their relationship, and were tending towards the morbid. There was a felt need, but it was for food and dress, and that was misinterpreted by the brain through the action of the alcohol, and became a craving for the repetition of the artificial stimulant. The dissociation of two things that ought to be inseparable (special necessity and special desire) was at the root of drinking and insanity. Alcohol emphatically weakened the power of control, as well as set up a diseased craving, and disordered function, the preliminary to death, first took place in such cases at the highest part—that was, in the mental portion of the brain. Merely to preach control to a dipsomaniac without adopting means to make his cravings cease, would not be scientific treatment of the disease any more than preaching control to a maniac who shouted, sang, and leaped. Except in 1876, they had never had so many cases sent to the asylum in which the assigned cause of the malady was alcoholic excess as this year; and the percentage of such cases was never so high, 25 per cent. of the whole. Taking the admissions to the West House alone—chiefly working people—and confining the inquiry to men between 25 and 60, the chief wage-earning period of life, he found that 42·7 per cent. were of those in which alcoholic excess was assigned as the predisposing or exciting cause. Discussing the cause of that increase of patients through drink from the wage-earners of middle-life, Dr. Clouston asked if it could be due to the increased prosperity of the working classes? He was himself inclined to the view that those persons who were naturally lacking in self-control, having been for many years previously earning little money, and now finding themselves flushed, might have, by a natural re-action, gone in for spending an undue proportion of their more easily earned money on drink, with the result of that increase of alcoholic insanity. They never had so many cases of general paralysis—a disease due to dissipation—as this year. During the five lean years of 1881-85, that terrible disease was much less frequent, being only 4½ per cent. of the admissions, instead of the 9 per cent. of this year; and it certainly was a little suspicious that the fat year of especially high wages was also that in which the next highest proportion of alcoholic causation of general paralysis occurred. A very considerable proportion of the suicides of each year were committed by those whose brains were in the early stage of alcoholism. . . . He was greatly concerned that whatever principle was adopted in future legislation in regard to the restraint of drinking, the 400 cases who year by year in Scotland were made actually insane by drink should in some way be considered and provided for as well as the ordinary habitual drunkard. For their own sakes, and that of the ratepayers, it was desirable that they be prevented from obtaining the poison which had already set their brain working. It ought to be made a penal offence to sell drink to any man who had ever suffered from an attack of alcoholic insanity. Dr. Clouston reported the lowest recovery rate for 17 years (30·3 per cent.). The general recovery rate, which was 50 per cent. in 1879, had shown a somewhat steady tendency to decrease during the past ten years. One of the characters who claimed to be the rightful heir to the Throne had been carried off during the year. His daughter, who had the delusion that she was a princess, was still in the asylum—an instance of direct heredity as to a special delusional state that is rare. In conclusion, the report stated that Dr. G. Robertson had succeeded Dr.

MacPherson as Senior Assistant Officer, and Dr. Elkins had been appointed Junior Assistant.

On the motion of the LORD PROVOST, Dr. Clouston was cordially thanked for his interesting report.

CHANGES IN THE IRISH LUNACY BOARD.

RESIGNATIONS OF DRs. NUGENT AND HATCHELL.

We believe that Dr. (now Sir) John Nugent was appointed Inspector of Lunatic Asylums in Ireland in 1847. The period covered is, therefore, forty-two years, possibly an unprecedented record of official work.

Dr. George W. Hatchell was appointed to the office early in 1857. In the fourth volume of this Journal will be found a notice of his appointment, and the feeling it elicited at that time.

THE NEW INSPECTORS OF LUNATIC ASYLUMS.

It has been known for some time that the vacancies caused by the resignation of Dr. Hatchell, which is understood to have occurred about a year ago, and of Dr. Nugent, which is a more recent event, were about to be filled up by the appointment of Drs. Plunkett O'Farrell and Maziere Courtenay. The long delay that has occurred in connection with these appointments is believed to be in part due to the fact that the Chief Secretary was awaiting the reports of the Departmental Commission, presided over by Sir Arthur Mitchell, which was deputed several months ago to examine into certain questions connected with the administration of the Irish lunacy department.

The new Inspectors are men of high professional character, of whom much is hoped. They are almost contemporaries. Both are distinguished alumni of the Dublin University. Dr. O'Farrell's college career was unusually brilliant. He obtained First Senior Moderatorship with his Arts Degree, and is a Gold Medallist in Natural and Experimental Science. Besides minor honours in the School of Physic, he received the Medical Travelling Prize when taking out his M.B. degree in 1869. Dr. Courtenay took the first place at his M.B. examination in 1871. As a student, he was perhaps the best-known and most popular man of his generation in Trinity College. Of the host of friends he then made many have already gone over to the majority, but not a few are left to congratulate him on his well-earned promotion. Some of the "old set" will also recollect with satisfaction that both the new Inspectors were educated at a famous old Dublin hospital (the Richmond), now unhappily threatened with extinction.

George Plunkett O'Farrell, M.D., gazetted Inspector of Lunatic Asylums, January, 1890, was up to the date of this appointment Medical Member of the Irish General Prisons Board, and Inspector of Reformatories and Industrial Schools. He formerly held the office of Local Government Board Inspector for the important district of Cork. Previously he had enjoyed a good provincial practice at Boyle, co. Roscommon, where he succeeded his father, the late Dr. O'Farrell.

Though Dr. Plunkett O'Farrell has unfortunately not had any special experience of insanity and asylum administration, his appointment is one that has met with very general approval, and, admitting the peculiar difficulties that hamper the Irish Government in filling vacancies in the public service, is probably the best that could be made. He has a considerable and a varied experience of official work, and he is undoubtedly an able and cultivated man.

Edward Maziere Courtenay, M.D., gazetted Inspector of Lunatic Asylums, March, 1890, is well known to many members of the Medico-Psychological

Association, having been for several years Irish Secretary. Dr. Courtenay has passed through a full apprenticeship in our specialty. He was Clinical Assistant at the West Riding Asylum, and subsequently was Assistant Medical Officer at the Derby Asylum, Mickleover. Since June, 1873, he has been Medical Superintendent of the Limerick District Asylum. His administrative work there was of a very high order. The condition of excellence to which he had brought that institution renders it at present comparable—and in some respects favourably comparable—with a good English or Scotch asylum. The energy and ability that this connotes must be evident to those who know what Irish asylums are, and what the difficulties are which in that country surround the work of such a reformer as Dr. Courtenay.

Dr. Courtenay's appointment has received an approval almost universal.

The Irish Government is to be congratulated on having shown in Dr. Courtenay's case not only special recognition of distinguished merit, but an openness of mind which has enabled it to see merit even in an asylum physician, and a magnanimity which has led to a choice being made from among a comparatively friendless and uninfluential body of specialists, instead of, in the ordinary way, from among the politicians. The ice has been broken. Dr. Courtenay is the first asylum superintendent who has ever been made an Inspector, and the first Inspector since the now forgotten Dr. White, dead nearly half-a-century, who had even a claim in courtesy to be called an asylum officer.

The new Inspectors have a big task before them—nothing less than the entire reorganization of their department. It is a task that will require patience, tact, unwearying industry, and unwavering courage. Both are young men, both have shown themselves energetic men. They come to their new work fortified with the prestige of success, and nerved by the knowledge of the high esteem in which they stand with the profession and the public. We wish them God-speed, and we are confident we shall not be disappointed in expecting from them such work as will redeem the character of the Irish asylums, and will, with the co-operation of the Irish resident physicians, bring our specialty, hitherto so much neglected in Ireland, to the same level to which it has attained elsewhere in Europe and America.

TENTH INTERNATIONAL MEDICAL CONGRESS, BERLIN, 1890.

INVITATION TO THE INTERNATIONAL MEDICO-SCIENTIFIC EXHIBITION, BERLIN, AUGUST, 1890.

In connection with the Tenth International Medical Congress, to be held in Berlin, August 4th-9th, 1890, there will be an International Medico-Scientific Exhibition.

The undersigned Committee of Organization has been authorized, by the representatives of the medical faculties and leading medical societies of the German Empire, to make the preliminary arrangements. We therefore cordially invite all who may wish to exhibit or participate in the above Exhibition; all exhibits, however, to be of a scientific nature.

The exhibits expected will be as follows :—

1. New or improved scientific instruments for biological and special medical purposes, including apparatus for photography and spectral analysis pertaining to medicine.
2. New pharmacological chemical substances and preparations.
3. New pharmaceutical substances and preparations.
4. New food preparations.
5. New or improved instruments for internal and external medicine, and allied specialties, including electrotherapy.
6. Plans and models (new) of hospitals, houses for convalescents, disinfection, and general bath-houses.

7. New appliances, such as pertain to nursing the sick, including the methods of transportation and baths for the sick.

8. Apparatus (new) for hygienic purposes.

The Special Committee on "Exhibition" consists of the following gentlemen: Commerzienrath Paul Dörffel, H. Haensch, Director Dr. J. F. Holtz, Director Dr. L. Loewenherz, Regierungsrath Dr. J. Petri, H. Windler, and the Secretary-General of the Committee of Organization. The names of the associate members of the Exhibition Committee, as well as the names of the heads of departments, will be made known shortly; also the conditions for exhibitors.

For applications for exhibits and information please address, Dr O. Lassar, Secretary-General, Bureau of the Tenth International Medical Congress, Berlin N. W. Carlstrasse No. 19.

Please designate all mail matter relating to the Exhibition, "Exhibition Affairs," and also enclose a visiting card or card of the firm, on which the name and residence is plainly written or printed.

The Bureau is open for the present from 5-7 o'clock p.m.

The Committee of Organization of the Tenth International Medical Congress: Dr. Rudolf Virchow, President; Dr. E. von Bergmann, Dr. E. Leyden, Dr. W. Waldeyer, Vice-Presidents; Dr. O. Lassar, Secretary-General.

PROPOSED HOSPITAL FOR THE INSANE IN LONDON.

Since the Occasional Notes of the Quarter were written, the London County Council has discussed (March 11th) the report of the Special Committee, proposed for adoption by Mr. Brudenell Carter, and declined the proposal, but referred it to the Asylums Committee.

The amendment was moved by Dr. COOPER:—"That the consideration of the report be adjourned for six months, and that it be referred to the Asylums Committee for consideration and report."

Dr. BOTT seconded the amendment, and contended that there was universal dissatisfaction felt by medical men at the manner in which the Committee had selected their witnesses.

Mr. AUSTIN urged the absolute necessity of the proposed hospital.

Mr. PARKER YOUNG said the important question of the locality of the hospital had not been discussed.

Mr. CARR-GOMM spoke generally in support of the recommendations.

Mr. MARTINEAU stated that the written communications of 55 superintendents were on the whole favourable to the scheme.

Mr. BRUDENELL CARTER, in reply, said that the report of the Committee would not be forwarded by being referred to the Asylums Committee.

The amendment was submitted and carried, and afterwards agreed to as a substantive resolution.

CERTIFICATE OF EFFICIENCY IN PSYCHOLOGICAL MEDICINE. M.P.C. EXAMINATION.

The following candidates for this certificate passed the examination held at Bethlem Hospital, December 19th and 20th, 1889:—

BOYD, JAMES PATON, M.B., C.M.Glas.; Glasgow.

BRISTOWE, HUBERT CARPENTER, M.B.Lond., M.R.C.S.Eng.; Bethlem Hospital.

EARLS, JAMES H., M.D.; London.

GAUDIN, FRANCIS NEEL, M.R.C.S.Eng., L.S.A.Lond; Surrey.

PATTERSON, ARTHUR EDWARD, M.B., C.M.Aberd.; London.

PITCAVIN, JOHN JAMES, L.R.C.P., M.R.C.S.; London.

PRICE, ARTHUR, M.R.C.S., L.S.A.; Birmingham.

SMYTH, WILLIAM JOHNSON, M.B., C.M.Edin.; Essex County Asylum.

WICKHAM, GILBERT HENRY., B.A.Camb., M.R.C.S., L.S.A.; Bethlem Hospital.

WILLIAMS, D. J.; London.

The following are the written questions asked at the Pass Examination:—

Examiners:

Dr. BLANDFORD and Dr. RAYNER.

Not more than Four of these Questions need be answered.

1. In what forms of insanity is suicide to be feared? What methods are chiefly adopted by patients, and what are the chief precautions to be taken?

2. What is meant by moral insanity? Give a case or cases from your experience.

3. What are the chief points to be observed in the examination of a person supposed to be insane? What facts would justify your signing or refusing to sign a certificate of insanity?

4. What treatment, regimenal, dietetic and medicinal, would you adopt in a case of stuporous insanity?

5. What are the post-mortem appearances in the brain of persons dying from acute melancholia?

6. What are the most common symptomatic prodromata of General Paralysis of the Insane, what conditions give them special significance, and how should such cases be treated?

The next examination will take place in July. For particulars apply to Dr. Fletcher Beach, Darenth Asylum, Dartford, Kent. For information respecting the Scotch and Irish examinations apply to Dr. Urquhart, James Murray Royal Asylum, Perth, Scotland; Dr. Conolly Norman, Richmond Asylum, Dublin, Ireland.

Obituary.

DR. CARL WESTPHAL.

On January 27, died at Constance, after a long and suffering illness, the Geheimrath, Professor Westphal.

His death is a heavy loss to science. Untiringly to his last moment has he laboured and worked, a prominent teacher of the University, an everywhere known, sought after, and esteemed physician, a true, never resting inquirer. Courageously has he continued on the field of battle until paralyzed by the long threatened sickness in body and mind. His name has an honoured sound not only in the ranks of his own department in his narrow circle of work, but far beyond the limits of his Fatherland has it extended. His great achievements will live in the kingdom of knowledge.

Carl Friedrich Westphal was born on the 23rd of March, 1833, the son of a well-known Berlin physician.

He studied from the year 1851 in Berlin, Heidelberg, and Zürich. In 1856 he passed the States examination. Returning from a scientific journey to Paris and Vienna, he was in 1858 appointed Assistant Physician in the department for small-pox at the Charité. After six months, he exchanged this position for that of an assistant physician in the section for insanity. In the year 1861 he qualified himself as "Docent" in psychology in the Berlin University, and from 1862 lectured with clinical instruction. Circumstances, however, induced him in 1868 to quit this department for a short time and devote himself to pure medicine. After the death of Griesinger, in 1869, he was appointed Professor Extraordinary and Directing Physician to the section for mental and nervous disorders. In 1871 he added to these two clinics an ambulance clinique for nervous patients. In 1874 he obtained his appointment as ordinary professor, and became a member of the Scientific Deputation of Public Medicine.

Westphal became a reformer in German psychiatry for the treatment of

mental disorders. The commencement of his psychological career happened at a time when the strait-waistcoat, and the whole restraint system, was in force in the asylums. He saw that this was not the right method of treatment, and understood how to enforce his thoughts by practical action. Not the least factor in exciting enthusiasm was the reading of Conolly's works.

With the greatest interest and lively zeal he followed the report of the introduction of the non-restraint system from England into Germany. What was regarded by many as an illusion, appeared to him as incontrovertible facts. A lengthened residence in England for the study of the practical care of the insane fully convinced him of the practicability of non-restraint. Repeatedly, and with pleasure, had he dwelt in this land in order to study the progress of the treatment of the insane. With the more prominent of the English and Scottish alienists—I only mention Dr. Lockhart Robertson, Dr. Hack Tuke, Dr. Maudsley, Dr. Sibbald, Dr. Savage—was he drawn into close relationship. He was an Honorary Member of the Medico-Psychological Association.

Space will not permit an extended enumeration of the scientific works and discoveries of the deceased. Of the important researches, I name the most important when I mention his *Researches into the Diseases of the Cord in Progressive Paralysis*, on *Epilepsy*, his observations and reflections on *Paranoia*, *Agoraphobia*, *Imperative Conceptions*, his contributions to the *Symptomatology and Pathological Anatomy of Tabes-Dorsalis*, among which the discovery of Westphal's symptom (with the pathological and anatomical basis thereof) has proved of the highest importance, his researches into the combined disorders of the spinal cord, the formation of vacuoles, pseudo-sclerosis, Thomsen's disease, etc., etc.

In later years it was especially the various forms of ophthalmoplegia which claimed his interest, and by these studies he not only advanced, to a very important extent, the pathology of this affection, but he also made most valuable discoveries in the department of brain-anatomy. All his works were characterized by clearness and precision of observation; not speculation and hypothesis, but soundness and fact were the signs of his mental products.

These characteristics which adorned the investigator and savant made Westphal also one of the most prominent teachers. Not to him was granted the gift of sparkling diction; he worked through convincing truthfulness and through the earnestness of his speech. Called to be the first representative of a department, which now first became a branch of instruction, he had brought it to the highest pitch of excellence, and aroused for it through the living word, a real enthusiasm, and true devotion for the same. A band of students have proceeded from his school who work as teachers in the universities and superintendents of asylums.

To him who stood near this distinguished physician was it granted to realize the superior qualities of the man. These qualities came out most brilliantly in the bosom of his family. Truth and uprightness—these were the springs of his thought and action. These at an early period made the strength of his character. With simple unselfish goodwill he met those who came to him seeking advice and help.

Deeply to be lamented is the fate of him who has left us, to whom a malady, long suspected by himself, tortured the last years of his existence. Never will he be forgotten by his colleagues, friends, and admirers.

Imperishable will his name live in the realm of science.—E. SIEMERLING.

DR. CHARLES H. NICHOLS.

It is so recently that this greatly esteemed and accomplished American physician visited England* and met so many of his British *confrères* that the intelligence of his removal by death from the work in which he was busily engaged comes to his friends with peculiarly vivid regret. No one who saw him at the Leeds meeting of the British Medical Association could avoid feeling

* In addition to his visits to the asylums of Great Britain and Ireland, he inspected some of the most important on the Continent.

much apprehension as to the state of his health, and the fear lest his mission to this country, in order to perfect his plans for the new asylum to be erected at White Plains, would overtask his strength at his time of life. His zeal was unabated, and his courage in undertaking a laborious work at the request of his Committee was most praiseworthy, but his wisdom in subjecting himself to the fatigue involved was doubtful, and as the event proved, he fell a sacrifice to what he conceived to be his duty. He returned to America in worse health than when he reached these shores, had a bad voyage, and arrived at home November 3rd, 1889. Early in December he took to his bed, and died on the 17th, of hepatic disease, suspected during life, and confirmed by the autopsy.

Dr. Nichols, a member of the Society of Friends, was born at Vassalboro, Kennebec County, Maine, October 19th, 1820. He studied medicine at the Universities of Pennsylvania and New York, and took his degree in 1843, after which he practised for a short time at Lynn, Mass. In 1847 he was appointed Assistant Medical Officer at the State Asylum for the Insane at Utica, N.Y., when Dr. Amariah Brigham was the superintendent. Two years later he became the physician-superintendent of the Bloomingdale Asylum, New York, where he remained about three years. In 1852 he proceeded to Washington and superintended the construction of the Government hospital for the insane (St. Elizabeth). President Fillmore, who had selected him for this purpose, placed him in charge of the Institution. The "New York Herald" states that "with the money appropriated (about £24,000) he purchased a site of 200 acres in a beautiful spot on the banks of the Potomac. The appropriation was not large enough to erect the building, but Dr. Nichols eked out the deficiency with his own means, and made bricks out of the soil removed for the foundation of the building. Finally he had the satisfaction of completing the structure without asking for additional money from the United States Treasury. A well-appointed lodge for the coloured insane—said to be the first distinct provision of the kind ever made for people of that race—was attached to the Institution." At St. Elizabeth, Dr. Nichols remained for a quarter of a century, erecting additional buildings, doubling the amount of land, and at the same time devoting himself to the treatment of the patients. He acted as volunteer surgeon of the St. Elizabeth General Army Hospital during the war, and was present at the battle of Bull's Run on General McDowell's staff.

In 1860 he married Miss Ellen Maury, daughter of John Maury, at one time the Mayor of Washington. She died not many years afterwards, leaving one son, who became Lieutenant Maury Nichols, and is attached to the Engineers' Corps at Willets Point, L.I.

In 1872 he married Miss Lathrop, the daughter of a college professor at Pittsfield, Mass. In 1877 he returned to his old post at New York, and since that period has been in charge of the Bloomingdale Asylum. He was elected an honorary member of the Medico-Psychological Association in 1885, the year after he had taken part in the proceedings of the Annual Meeting held in London under the presidency of Dr. Rayner, and made a telling speech at the Greenwich dinner. He was for many years the President of the Association of American Superintendents of Institutions for the insane. The honorary degree of M.A. was conferred upon him by the Union College of New York, and he received that of LL.D. from the Columbia University at Washington, and was a member of the New York Academy of Medicine.

Dr. Nichols' life was eminently a practical one, and he was nowhere more at home than in the walls of his own asylum, where he was a great favourite with the patients, and was highly esteemed by the staff, among whom Dr. Sanger Brown is known in this country by his researches on Cerebral Localization in conjunction with Professor Schäfer at University College.

Dr. Nichols was interred at Washington, but a funeral service was previously held in the chapel of the Bloomingdale Asylum, the Chaplain, the Rev. Dr. Peters, officiating. The Medical Staff, Dr. Chapin, of the Pennsylvania Hospital, Dr. Stearns, of the Hartford Retreat, Dr. Buttolph, Dr. Samuel B. Lyon, Dr. William E. Dold, etc., were present, in addition to the members of Dr. Nichols' family.

PROFESSOR LEIDESDORF.*

Dr. Max Leidesdorf, late Professor of Psychiatry in the Medical Faculty of Vienna, and an Honorary Member of our Association, died October 9, 1889. He stood in the foremost rank of clinical alienists in Austria. Born in Vienna, in 1816, he studied physic, and after his medical education visited France and England. Having graduated in Bonn, he soon afterwards took charge of a private asylum in St. Petersburg, but ultimately returned to Vienna. Leidesdorf appears to have had to struggle with limited means, and was without any social advantages in his professional career. His enormous energy, however, overcame every difficulty. For 30 years he resided in Vienna, and in association with Dr. Obersteiner, sen., he directed the private asylum at Döbling, founded by Dr. Goergen, whose institution was well known. Under Leidesdorf it flourished greatly. In 1866 he was appointed to the Chair of Psychiatry, in the Vienna University, and attained a gold medal for art and science. In 1871 a Clinic in Medical Psychology was established in Vienna, but Leidesdorf failed to obtain the post. Resignation was not, we are told, his *forte*, and in the following year he was rejoiced to obtain the possession of rich clinical materials, and after Schlager had departed he was made director of a general hospital in Vienna for the observation of mental disorders.

In 1875 he at last became Clinical Teacher of Psychiatry, for Professor Meynert showed that this was misplaced in the general hospital, and ultimately a special ward for observation was placed at his disposal in the public asylum for Lower Austria. So at last he obtained the object of his wishes, but this success was not an unmixed pleasure, as he had much to put up with during the first few years, as Meynert had before him. His conciliating character enabled him to survive all his difficulties, and at last tranquillity came. He could look back upon an honest career of work, and only one care disturbed him—as he, after 13 years of labour, was compelled through sickness to retire from his post, to the great grief of his friends and scholars—whether the clinic would be maintained at Vienna, where alone of all German Universities there were two Chairs of Psychiatry. He hailed the appointment of Krafft-Ebing with great satisfaction, for he was then satisfied that his clinic would be continued. Leidesdorf could not follow in the footsteps of Heinroth and Idler, but, on the contrary, recognized the superiority of Griesinger's teaching. What Skoda was to medicine in general he was to Medical Psychology. He wrote many valuable articles. Among these were *Insanity and Lung-Disease*, *On the Causes of Insanity*, *On the Condition of the Brain in the Primary Forms of Insanity*, *The Sympathy between the Brain and the Nerves of the Body in Insanity*, *Chorea Minor in its Relation to Psychical Disorders*, *Brain-Syphilis in Relation to Mental Disorders*. In 1860 he published "*Pathology and Treatment of Mental Disorders*," and in 1865 his *Manual of Insanity*.

Leidesdorf was free from all bombastic rhetoric; he spoke easily, however, and he was an eminently practical teacher. As Professor Wagner says: "*Er war mit Leib und Seele Lehrer.*"

He was consulted in regard to the mental condition of the Sultan Murad, and subsequently he had under his care at Döbling the daughter of the King of Denmark, and sister of the Empress of Russia, the Princess Thyra of Cumberland. To his personal influence he owed a great part of his success; he had a happy talent of pleasing the lowest and highest with whom he associated, and he knew how to employ exactly the right word and tone with others. The poorest among his patients felt as if his goodwill and attention were concentrated upon him. In spite of his age and severe attacks of illness, Leidesdorf was wonderfully brisk to the end of his life; he suffered for two years untold pain, so that death at last came to him as a long desired release from suffering.

* This obituary is freely condensed from the notice written by Professor Wagner in the "*Allgemeine Zeitschrift für Psychiatric.*"

DR. KANDYNSKI.

Dr. W. Ch. Kandynski died at St. Petersburg on the 15th of July, 1889, in the fortieth year of his age.* Kandynski came of a family of Siberian merchants who had been reduced from affluence to poverty by unfortunate undertakings. It was through great struggles and privations that he completed his studies at Moscow. He became Doctor of Medicine in 1872. After some years in a hospital at Moscow, he became surgeon in the Russian Navy, and served in the Black Sea during the Turkish War. After this he became insane, and remained in an asylum for two years. His recovery seemed largely due to his earnest and pertinacious struggles with his own hallucinations and delusions. The record of his example shows how much a man may do to cure himself of insanity. After his recovery he devoted himself to the study of psychiatry. In a paper on "Hallucinations," published in the "Archiv für Psychiatrie" (B. xi., Heft 2),† he portrays with a wonderful blending of graphic power and analytical skill the hallucinations and delusions that beset him. This was followed by a pamphlet entitled, "Kritische und Klinische Betrachtungen im Gebiete der Sinnestäuschungen" (Critical and Clinical Views Concerning the Delusions of the Senses), Berlin, 1885. Nothing more vivid and original than Dr. Kandynski's descriptions have passed my hands since I undertook the task of writing the German Retrospects for this Journal, now sixteen years ago. These works, which attracted much attention in Germany, are very worthy of translation into English. Besides this, Dr. Kandynski wrote in Russian a "Historical Survey of the Conceptions about the Soul in Man and Animals," "On Nervous and Psychic Contagion," and several other papers. He also translated into Russian Wundt's "Principles of Physiology" and Meynert's work on the "Mechanism of Mental Action." In 1881 Kandynski became a supernumerary assistant in the Asylum of St. Nicholas, and in 1885 he gained by competition the place of Senior Superintendent. He worked with unflagging diligence till the end. His last manuscript closes with the words, "I can write no more, for I see no more clearly. Light, light!" He had laid out for himself a place where he wished to be buried, to which he was borne on the shoulders of his colleagues and the staff of the asylum. We are told by the writer of the notice, Dr. A. Rothe, that not only was Kandynski a man of great scientific attainments and originality of mind, but that he had a warm and feeling heart, and sought through his own sufferings to relieve the miseries of others.—W. W. IRELAND.

Appointments.

CAMPBELL, A. W., Junior Assistant Medical Officer to Salop and Montgomery Asylum.

COURTNEY, E. MAZIERE, M.B., M.Ch., Inspector of Irish Lunatic Asylums.

FARMER, F. R., M.R.C.S., L.R.C.P., Assistant Medical Officer to Fisherton House Asylum, Salisbury.

GOODALL, E., M.D., B.S.Lond., M.R.C.P., Pathologist to West Riding Asylum, Wakefield.

GOODWIN, W., M.B., C.M.Aberd., Senior Resident Medical Officer to Joint Counties Asylum, Carmarthen.

GRIFFIN, L. T., L.R.C.P.Lond., L.R.C.S.I., Resident Physician to Killarney District Lunatic Asylum.

NASH, VINCENT, M.D., Resident Assistant Medical Superintendent to Richmond Asylum.

O'FARRELL, G. P., M.D., T.C.D., M.R.C.S.Eng., Commissioner of Control in Lunacy, *vice* Dr. Hatch.

PEARSON, WM., L.R.C.P., L.R.C.S.Ed., Assistant Medical Officer to Norwich City Asylum.

WOOD, OSCAR, B.A., M.D.Dub., Medical Superintendent to Cork District Asylum.

* See the "Allgemeine Zeitschrift für Psychiatrie" (xlv. Band, 2 Heft).

† See German Retrospect in this Journal for October, 1881.

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JULY, 1890. VOL. XXXVI.

PART 1.—ORIGINAL ARTICLES.

*Cycling for the Insane.** By C. THEODORE EWART, M.D.,
Assistant Medical Officer, Leavesden Asylum.

There is no example of two agents so closely united as Mind and Body without some mutual interference taking place, and an increased knowledge of the workings of our bodies has vastly increased the knowledge of our mental actions, and will continue to do so more and more as we continue our researches. To confine ourselves to the study of the nervous substance would be to misrepresent the union, and the knowledge of that substance, however complete, would not suffice to solve the problem.

In all ages and in all countries it has been recognized that the Feelings possess a natural language or Expression, and so constant are the characteristics that we look upon them as a part of the emotions. In this uniformity of connection between feelings and their bodily expression, our knowledge of each other's mind and character is based, and unless there is deliberate concealment it is not difficult to tell when anyone is pleased or sad, angry or pained. The influence of bodily changes on mental conditions is seen by the effect on our feelings of hunger and repletion, fatigue, rest, cold and warmth, bodily disease, sleep, and old age. A man in health wakes in the morning flushed with energy and spirits, his breakfast confirms this state, the mental powers are at their maximum, gradually fading as the nutrition is used up, but renewed again by rest and refreshment; the memory ebbs and flows with the bodily state, vigorous when we are fresh, sluggish when fatigued, and at the end of the day languor develops and fades into the unconsciousness of healthy sleep.

* Paper read at Bethlem Hospital at the Quarterly Meeting of the Medico-Psychological Association, May 15th, 1890.

Those who fancy that trains of thought have little dependence on the bodily organs should reflect on such facts as these: if, when engaged in any bodily operation, an interesting thought presents itself to us we stop and remain at rest until the excitement is over; cogitations induce some bodily attitudes which painters seize hold of as the outward expression of thought; if certain bodily conditions were not requisite to the intellectual functions, why should sleep do away with all thought except the incoherency of dreaming?

By the law of Relativity, *a change of impression is necessary to our being conscious*, and it is well known that an unvarying action on any of our senses has often in time the same effect as no action at all; we are not conscious of the pressure of the atmosphere; the feeling of heat is the result of a transition from cold, the sensation of light supposes a transition from darkness or shade, the blessings of rest and retirement are only pleasant by their contrast with toil and excitement; the incessant demand for novelty and change proves the power of this law in all the provisions for enjoyment. The nerve fibres and corpuscles on being stimulated undergo change and gradually become exhausted, and in consequence need repose. By the law of Novelty the first moments of a stimulus are the most vivid, and no second shock, whether of pain, pleasure, or mere excitement, is ever fully equal to the first, notwithstanding that ample time may have been given for the exhausted nerves to recover themselves. The nervous system should therefore be duly refreshed by repose and nourishment, and never pushed on any occasion or in any part, to the extreme limits of exhaustion. The principle that regulates feeling in general is liable to considerable modification according as the feeling assumes the character of either pleasure or pain, and these two are mutually destructive like cold and heat; the one is allied to an increase and the other to an abatement of all the vital functions; there is the animation, stir, and vigour of the one, and the depression and collapse of the other. The mental effect of diminished power in the various organic functions produces ultimately some failure in the brain itself, and examination of the organic functions proves conclusively that in a pleasurable mood they are reversed in efficiency; respiration is more rapid, pulse stronger, digestion exalted, and we see in especial prominence the union of mental delight and bodily energy. In depression all is reversed. When there is an accession of nervous power, the body is erect, the features open, the voice full, all proving that the extensor muscles are

strongly stimulated, while in depression there is a relaxation of the muscles—hence a general stooping and collapse of the figure. The law just illustrated is the law of Self-Conservation, because if it did not exist the system could not be maintained: we follow pleasure and avoid pain, but if pain was wholesome and pleasure injurious we should soon incur entire shipwreck of our vitality, as we sometimes do through tendencies that are exceptional to the ordinary law. The mere presence of blood does not evoke full nervous activity; for this it is necessary that the nerves be stimulated, and this stimulation, when in the proper degree, is pleasurable; to pass the limit is always painful. All *conflicting* and *intense* stimulations induce pain by wasting vital power, lowering the mental tone, and momentarily exhausting the power of the nerves implicated. To obtain the best results from pleasure it should be *voluminous*—moderately affecting a large sensitive surface, as we observe in change and variety, the stimulation being multiplied, and no one part pushed to exhaustion. It is, however, unnecessary to probe deeper into the system of complicated dependence of mind and body.

All our asylums are admirably organized in respect of outdoor work, and the several superintendents recognize its great value. "In County Asylums I believe an advance of real value from a curative point would result from an introduction of a larger number of day labourers, to whom convalescents and harmless patients could be entrusted during working hours, so that a class of work which would entail a greater call on the intelligence could be effected. At present in many asylums our patients are worked too much in large groups, and have a tendency to get into a stupid, morose, and automatic condition, which should be avoided" (Dr. Campbell). Again, "The patients are involuntary inmates, their liberty is curtailed, their treatment is prolonged—in many cases for years—their associations are naturally depressing, and their minds only too ready to take their cast from their surroundings—the melancholics contemplating suicide, and the excitable to be thrown on their own turbulent resources. The least we can do then is to make the wards as cheerful as possible, and to impart as much interest as possible into the daily life of the asylum" (Dr. Cassidy). The Commissioners state that "to devise suitable work and effective inducements to engage in it requires much thought, trouble, and ingenuity . . . not much less important than employment is regular, sufficient, and varied exercise. It is now the rule to arrange for giving extended

walks rather than confine the patients wholly to the airing-courts, where they saunter about in a listless manner, or crouch in corners." At the outset, patients, like other people, have an aversion to do anything, however much it may be to their benefit, but a little judicious advice, coaxing, and example will soon overcome all difficulties. In this country it is hardly requisite to point out the advantages that are to be gained from sports, which afford healthful exercise in the open air, the love of such pastimes being a sort of passion, the young and middle-aged being equally possessed of it; and the aim of this paper is merely to suggest that cycling, which has largely gained ground during recent years, be added to the list of out-door amusements indulged in by the inmates of an asylum.

In exercise we have arterial blood changing its condition to venous; this is due to chemical change, and chemical change means heat, and by heat the sweat glands are stimulated to act freely. A second result is that breathing is quickened and the diaphragm acts directly as a stimulus to the kidneys, liver, and stomach, so that it is not so much the shaking of the body which acts on the liver as the quickening of breathing. Any observant man who once gets into the habit of taking exercise that makes him sweat soon finds what a wonderful secret it is of health and happiness. The more work the skin does the less remains for lungs, liver, and kidneys. It clears the head, as anyone knows who works hard up to the time of taking exercise and begins again after. How many gloomy thoughts and brooding cares have been dismissed by its genial working! How it purifies a man's views of life and leaves the body in a tranquil condition ready for mental labour, nourishment, or soothing sleep! "The simple fact that the muscles exist for the purpose of fulfilling the commands of the nervous system might of itself lead to the inference that a healthy mental stimulus ought to be considered as an essential condition or accompaniment of exercise. Hence the superiority, as exercises for the young, of social and inspiring games, which, by their joyous and boisterous mirth, call forth the requisite nervous stimulus to put the muscles into vigorous action, and hence the utter insufficiency of the dull and monotonous daily walk" (Combe). If the will compels the muscles to work, while the nerves are not naturally stimulated, fatigue indeed will result, but fatigue alone is not the object of exercise, otherwise an hour on the treadmill would be as healthy as a run on a cycle. It is absurd to think that a walk with a friend

—perhaps a little better than a walk without—along a road you have been over 100 times can give the required relief, as exercise, which absorbs the thoughts and rivets the attention. They talk about the same work that has been occupying their thoughts for the last week and repeat the self-same jokes. If it is monotony that makes their daily routine dangerous, their very recreation only adds to the danger and does not diminish it; it is a miserable waste of time in many cases, and being a mere exposure to the weather, may do mischief where good was intended. However, a walk, though dull, is better than remaining indoors, and it may at any rate warm the feet and quicken the circulation.

Rushing through the air at 12 miles an hour, will lift the gloomiest thoughts from the mind, be it only for a short period, and what torpidity of soul is not surmounted by the continuous, delicate interaction of nerve and muscle! Physiology teaches the general fact that mental actions repose upon a nervous power, sustained, like every other power, by nutrition, and having its alternations of exercise and rest. It also informs us that, like every other function, the plasticity may be stunted by inaction, and impaired by over-exertion. The human body is a great aggregate of organs or interests—digestion, respiration, muscles, senses, brain. When fatigue overtakes it the organs generally suffer, when renovation has set in the organs generally are invigorated. To increase the plastic property of the mind you must nourish the brain, and you naturally expect that this result will ensue when the body generally is nourished, and so it will if there be no exorbitant demands on the part of other organs, giving them such a preference as to leave very little for the organ of mind.

The object of the following remarks is to discuss the question of cycling purely in its relations to health. No attempt will be made to give a history of its growth from the “dandy-horse” and “bone-shaker” to the roadster, racer, tandem, and sociable. A knowledge of cones, balls, spoon or band brakes, of steering and gearing, although practically useful, has little direct bearing on the hygienic aspect of this pursuit, with which alone we are here concerned.

When the ordinary non-cycling observer sees a rider on a bicycle gliding quietly along a bit of smooth roadway with apparently the least possible expenditure of muscular power, he is apt to believe that speaking of bicycling as “exercise” in the ordinary acceptation of the term is to be guilty of culpable exaggeration. “Such a description,” he will exclaim,

“may be tolerated in the mouth of an enthusiast, but it is opposed to common sense;” or, if he meets another rider whose legs move up and down with furious and demonstrative persistence like “animated pistons,” he will credit the rider with a large amount of expended energy, but he will be inclined to suggest that bicycling exercises only the legs, and that on this account it falls far short of the standard of ideal exercises. This view is a common and a very natural one, but it is utterly fallacious, and the fallacy arises from ignoring one most essential feature of the exercise, and to this feature we will now call attention.

Those cyclists who have a sufficiently vivid recollection of their “learning” stage will admit that the task was a severe physical one, and that the feeling of fatigue was not confined to the legs alone, but was co-extensive with the whole body. The main feature of the exercise is not so much the *propulsion* of the machine as the *balancing* of it—the adjustment of the body in its application of motive power in such a manner as to secure an equal distribution of its weight on each side of the direct line of motion. It would be difficult to find any other pastime in which such a *thoroughness* of bodily exercise is attainable, and it is this very fact which constitutes its chief danger, for it is comparatively easy to reach the stage of fatigue without being aware of it. Owing to the exhilaration produced, the rider does not perceive he is getting tired, and the stages at which healthy fatigue becomes weariness, and weariness exhaustion, follow each other more rapidly than in any other exercise, but if discretion and care be adopted this can easily be prevented. In the case of tricycling, the special feature of the *balance* and other considerations arising therefrom do not enter so prominently into the question, but in one respect it may be thought to be the more severe work of the two, as the weight to be driven is heavier, and there is greater friction; on the other hand, tricycling is attended by less personal danger, the rider can slacken up, rest at any moment without the fatigue of dismounting, and he can carry more luggage.

For any exercise to take a really high rank, it is requisite that it should be taken in the open air, and in this respect few, if any, can approach cycling. In the gymnasium the exercises are more exhausting than those of road, river, or field, because of the inferior conditions of “diffusion” of air under which they have to be performed. There is an infinitude of hygienic distance between an air which is capable of bestowing the greatest amount of possible good, and one which only passes

muster as innocuous, and that form of pursuit is the healthiest which ensures the most rapid passage through it. The terms "bracing, relaxing, and change" of air are household words with us, and the cyclist can more readily procure them than anyone else. A very slight alteration in levels, soils, or geological formation will frequently effect as great a contrast in the character of the air at 10 miles distance as at 100, and a quiet day's ride may often prove more efficacious as well as more economical, than a fortnight at a fashionable watering place, thus enabling the daily struggles of the constitution, with its environment, to be carried on with a fair measure of success. In our composite nature, mind and body react upon each other with such a nicety of associated influences, that there is always a strong *à priori* presumption against the success of any system which fails to secure a due consideration for both. Health is not merely a matter of muscles, sinews, and lungs—a dull monotonous exercise can never be health-giving; time must not only pass, but it must pass pleasantly and briskly; each muscular movement must be associated with a purpose which gives a stimulus and zest to the whole performance. A walk may often be a dull affair, the fixed natural objects passed may be too familiar to the walker, who, from the comparatively limited area at his command, has of necessity to traverse the same ground; variable objects, animate and inanimate, do not present themselves with sufficient rapidity to break the spell of monotony. The cyclist, however, need never find his ride dull—he has a larger range at his command, the number of objects of interest he passes is multiplied by his pace, and the mind is supplied with a constant succession of occasions for pleasant observation. Should he be in the habit of making an extremely familiar round, loose stones, ruts, and the thousand and one features which distinguish an ordinary highway from an asphalt track will at any rate keep his attention sufficiently engaged to prevent the weariness arising from absolute vacuity. Companionship undoubtedly lends a great additional charm; it is pleasant at the end of the day to be able to talk over the scenes and incidents of the ride with one who has been an actual participator in them.

It is impossible to over-estimate the value of any out-door exercise which proves itself both suitable and attractive to women, and there is nothing whatever in the nature of the exercise to render the use of the tricycle of more service to one sex than to the other, whereas the greater degree of confinement in the asylum to which the female patients are necessarily

subjected, and the more restricted number of out-door exercises which are open to them, render it all the more important that this recent addition to the list should receive full and general recognition. In a recent number of the *Asclepiad*, Dr. Richardson says, "I do not recall seeing any special functional injury of the muscles as a result of cycling. I never knew cramp or spasm as a direct result. I have never heard of rupture of muscles or of the fascia surrounding them, not even when they have been most tired. Sprain, which is a common accident from many exercises, is most uncommon as a result from working the machine when it is separated from collisions and falls, with which I have at this moment no concern. I have never met with a single instance in which I could trace the common accident of rupture or hernia to the exercise, although in the first days of cycling this accident was named as one which would of itself, from its frequency, put the exercise out of the field in a very short time." The great point is the necessity for caution in not over-doing it. Accidents may occur, of course. Those that are due to some vibrating shock starting a hidden flaw in the steel are extremely rare, and hardly deserve notice, but can be guarded against by getting the best machine from the best makers. Others occur through lack of experience, and are to be prevented by the acquisition of greater skill. A machine has been brought out which is capable of carrying any number from 1 to 20, and is readily convertible to suit any lesser number than the maximum for which it is built; it is well-supplied with brake power, each pair of wheels having a brake. The riders are mounted in single file, the advantages of this arrangement being (1) that it becomes more manageable; (2) that power for power it presents less surface to a strong headwind, one of the most difficult obstacles for cyclists to overcome. The whole control and steering is in the hands of one man, and in the most densely crowded thoroughfare there is little apparent difficulty in managing the machine, as it turns easily in less space than a hansom needs. Ten miles an hour would be considered a low average rate, and sixteen have been easily accomplished; the cost for each rider is about 14 guineas. Whatever be the sex of the riders, the recognized rule of the company riding should always be that the weakest member of the party is to be the absolute arbiter of pace and distance—not, indeed, in his or her own person (for there will always be an anxiety to disprove this assumption of inferior strength), but that the responsible leader or organizer of the ride should always take the powers

of the weakest as his standard of measurement. Though we have already indeed been introduced to an embryonic form of amphibious cycle capable of adapting itself to ploughing the pathless waste of the ocean, or dinting the public highway, it will not serve the present purpose to enter into such speculations, but it may be mentioned that an aerial bicycle has been invented and tried successfully, the cost of each machine not being more than £20.

For most of us the exquisite loveliness and delight of a fine summer's day have a special charm. The very life is luxury. The air is full of sound and sunshine, of the song of birds, and the murmur of insects; the meadows gleam with golden buttercups, we almost fancy we can see the grass grow and the buds open; the bees hum for very joy; there are a thousand scents, above all, perhaps, that of new-mown hay. There are doubtless many patients before whom "all the glories of heaven and earth may pass in daily succession without touching their hearts or elevating their minds," but, in time, it is possible even these would, by means of cycling, have their love of Nature, which had been frozen or crushed out, restored. Thus all Nature, which is full of beauties, would not only be a never-failing source of pleasure and interest, but lift them above the petty troubles and sorrows of their daily life.

*The Propagation of Insanity and Allied Neuroses.** By S. A. K. STRAHAN, M.D., L.R.C.P., Barrister-at-Law, Assistant Medical Officer, County Asylum, Northampton.

For the past thirty years our insane population, as recorded in the annual Reports of the Commissioners in Lunacy, has steadily increased at the rate of over 1,500 a year, until in December, 1888, it had reached the alarming total of 84,340. Nor can even this large total be taken as at all fully representing the number of our insane. According to the census returns in 1871, the Commissioners' figures represented only 82·1 per cent., and in '81 only 86·5 per cent. of those returned as idiotic and insane; and when we remember that the census returns were made by fathers and heads of families more likely to under than overstate the numbers of afflicted in their households, we may venture to estimate that at present our insane population is fast approaching the enormous total of 100,000.

* Paper read at the Quarterly Meeting of the Medico-Psychological Association, held at Bethlem Hospital, May 15th, 1890.

Some time ago the Commissioners' annually-increasing figures attracted public attention, and in certain quarters caused some uneasiness. The cry got abroad that insanity was on the increase, and at once the figures were examined and analyzed with a view to setting the public mind at rest by proving that there had in reality been no increase in insanity in recent years. We have all heard of what can be proven by statistics, and it is almost needless to say that this attempt on the part of the statistician to allay the uneasiness in the public mind was in part successful. When he touched the figures it at once became clear that accumulation pure and simple was responsible for much of the apparent yearly increase of our insane. It was shown that the rate of admission into asylums in proportion to the population had increased only slightly within the past twenty years. In 1869 it was 4·71 to ten thousand of the population; in 1879 it had only increased to 5·16; and in 1888 the proportion still stood as in 1879. However, notwithstanding the equality of the figures for '79 and '88, it was generally admitted that there was probably a slight increase; and this was explained as being the result of the more perfect certification of the insane which is now practised, and which has led to the disappearance from their usual haunts of the village fool and eccentric wanderer of the last generation. Next it was shown that the death-rate in asylums had materially decreased in recent years, having fallen from 10·47 in 1879 to 9·69 in 1888. It was also pointed out that during the same decennial period the recovery rate had, unfortunately, also decreased, falling from 40·50 per cent. on the admissions—excluding idiots and transfers—in 1879 to 38·71 in 1888.

Here, then, was the explanation of the yearly increase in our asylum population. The people continued to be received into the asylums at about the same rate as heretofore; and as fewer of them died and fewer recovered, of course they must accumulate. This much the statistician proved, and this much only. Even Mr. Noel A. Humphreys, who recently read a paper on the subject before the Royal Statistical Society, did not prove more. He summed up the outcome of his labours thus: There could be no great increased tendency towards mental disease among the people since statistics proved that people are going insane to-day in almost exactly the same proportion as they did ten or even twenty years ago.

There are, however, one or two matters which the statistician did not touch upon, the consideration of which is absolutely essential to a proper understanding of the question of the

prevalence of insanity and allied disease. Had he enlarged his field of inquiry so as to include these, I doubt whether even his verdict would have been so satisfactory.

First, there is the question of child suicide. Fifty years ago suicide of children of tender years, which has of late become so painfully common, was almost unknown. Unfortunately, we have no statistics to fall back upon, but I believe members present will endorse my assertion. This suicide among children is generally put down as the result of an earlier development of the mental powers in consequence of early and forced education; that is to say, the period of reasoning discretion is arrived at now at a much earlier age than formerly. To this there are two objections: First, that suicide was almost unknown among the children of the upper classes of fifty years ago, although they were as highly educated, and frequently at as early an age as the children of to-day; and, second, that this explanation to have any weight must be based on the assumption that suicide in these young people is the outcome of reasoning, which I believe few will admit. Even in adults the determination to quit life is less frequently the outcome of reasoning than of a morbid impulse which impels the individual to the act against his reason. In children, I should say, suicide is almost always an unreasoned, impulsive act.

Education at high pressure, and begun at too early an age, has doubtless something to do with this lamentable destruction of child life, inasmuch as it conduces to the building up of those disordered nervous conditions from which is evolved the insane diathesis; or it may act as an exciting cause in an already ill-balanced or ill-developed mind. Beyond this, I fear, we cannot make it responsible. There is no form of mental disorder so largely attributable to hereditary taint as the suicidal impulse, whether accompanying mental depression or standing alone, and to this cause we must set down the great majority of cases irrespective of age. Dr. Maudsley truly says of these child suicides:—"If the child's family history be inquired into it will usually be found that a line of suicide, or of melancholic depression with suicidal tendency, runs through it; so it comes to pass that a slight cause of vexation is sufficient to strike and make vibrate the fundamental life-sick note of its nature."*

Another matter which requires notice from the statistician and explanation before we can admit that there is no increased

* "Fortnightly Review," May, 1886.

tendency to insanity in the populace is the suicide of adults. If it be true that the increase in the numbers of the certified insane is almost entirely due to the gathering together of the bulk of our insane population in asylums, then it follows that the proportion of insane outside asylums must be proportionately diminished; and, consequently, suicide, which we must take in the majority of instances to be the result of mental disorder, should be less frequent than it was before the insane were so carefully weeded from the general population. But what is the fact? On reference to the Registrar General's Reports we find that deaths from suicide are increasing year by year much as the certified insane are. The number of deaths from suicide registered in 1864 was 1,340, which by a steady and gradual increase had mounted up in 1888 to 2,308. Nor is this an apparent increase only, for while the proportion of deaths from suicide in 1864 was only 64 to the million, it had risen in 1888 to 81 to the million, an increase of as nearly as possible 33 per cent. within less than twenty-five years.

How those who maintain that there is no increase of mental disease among the people explain these figures of the Registrar General I do not know. So far as I know, they have not been considered in this connection; but I fail to see how they can reconcile the fact that suicide, which is an unmistakable sign of what we know as the insane temperament, is increasing among the people with their assertion that the insane have been winnowed from the general population to an extent hitherto unknown. Until this be satisfactorily explained we can hardly believe that insanity is not more prevalent now, when suicides rank in the Registrar General's Report at 81 to the million and we have over 84,000 certified lunatics in asylums, than when the certified insane were less than half that number and the suicides 33 per cent. under what they are to-day.

The third point to which I would call your attention is the fact that the number of deaths registered under the head "Diseases of the Nervous System" has increased from 33,429 in 1864 to 49,985 in 1888, being an increase of no less than 50 per cent., or of 146 to the million, within less than 25 years. This shows clearly that nervous disease other than insanity has vastly increased, and would agree with the often-repeated assertion of the general practitioner, that nervous disorders are the curse of the present age.

And now as to the cause of this increase of nervous disease, for I think we must admit that there is an increase. Shall we accept the list of causes usually set forth, such as forced

education, abuse of alcohol, increase of city life, and the wear and tear of the feverish pace at which we live? These are, indeed, causes of nervous degeneration and disease; but they are only the remote causes in the vast majority of the cases to which we now refer. They are the causes of nervous disease just as they are the causes of scrofulous disease; they are the causes which have laid, and are laying, in one generation the foundation for the disease which is to appear in the next. Nervous disease of the graver kind, as met with in the imbecile, the insane, the epileptic, or in the habitual drunkard or criminal, is very seldom the work of one generation. True, we may at times have idiocy or imbecility, apparently arising from some unhappy blending of parental characters in themselves sound and healthy, and insanity, or epilepsy, or general paralysis arising in healthy stock, apparently from one or more of the causes mentioned above, or from sunstroke or mechanical injury to the brain. Yet these cases, which might well be classed together as traumatic, are very few, and, I am convinced, would be rarer still could we get anything like an accurate family history. It is not everyone who has suffered sunstroke or got knocked on the head who goes insane. Latterly I have been inquiring as carefully as I could into the family histories of the few such cases at my disposal, and I am led to the belief that even here we shall find that the inherited insane diathesis is responsible for the mental disturbance in the majority of such cases.

A good example of the wonderful influence of inherited taint is seen in those painful cases of melancholia which we so frequently meet with among those of atheromatous habit who have passed the meridian of life. In these cases, when the vessels become so loaded with earthy matter as to be impervious to the blood, the surrounding tissue undergoes the usual degenerative changes consequent on starvation. Now, if the patient be of stable nervous temperament, he will, as the nervous degeneration proceeds, sink quietly through his second childishness into the oblivion of dotage; but if, on the other hand, he has inherited the insane diathesis, delusions of persecution, of impending poverty, or of eternal condemnation will arise to make miserable the evening of his life. And as this inherited innate tendency acts in these cases, so, I am convinced, does it act in most of those cases in which we find mental aberration following sunstroke, reducing bodily disorders and mechanical injuries to the head.

I do not mean for a moment to deny that civilized life,

artificial and unnatural as we know it to be, is the cause of a great mass of our nervous, as it is of all other of our degenerative diseases. What I wish to infer is that the nervous disease commonly met with by us as alienists is seldom the production of the individual. The foundation for it has been laid in previous generations. Consequently we can look upon the present unfortunate state of things without any self-reproach, recognizing it to be the outcome of the system which the State has established and which it is our duty merely to administer.

From time immemorial it has been recognized that the great cause predisposing persons to insanity of all kinds is hereditary taint, and as time goes on, and we are enabled to make more careful inquiry into the influence of hereditary predisposition on the production of disease, the truth of this old-time belief becomes more evident. Unfortunately we are not in a position at present to say authoritatively what amount of the insanity met with to-day is due in the first instance to inherited weakness. What statistics we have on the subject while pointing directly to heredity as the great predisposing cause, vary so greatly that it is almost impossible to strike an average for the whole. This variation of the figures of different observers, which is so much to be regretted, is directly due to the efforts of relatives and friends of the insane to conceal what they consider a stigma upon the family. We are all only too well acquainted with the manner in which these people, even in the poorer ranks of life, endeavour by every means to keep from us a knowledge of such family taint. Every writer on insanity has commented on it, and all condemn it. One writer has compared the difficulty experienced in getting at the truth in such cases to that which might be expected in dragging from an erring woman a confession of her one frailty. Yet, notwithstanding this hard lying on the part of relatives and friends, careful observers have been able to trace in from 25 to 90 per cent. of the insane coming under their notice a distinctly marked hereditary tendency to insanity or allied nervous disease. Moreau put his percentage as high as 90. Burrows said 85, Holst 69, Jassen 65, Michéa 50 to 75, Thurnam 51, Webster 32, Needham 31, Guislain 30, Maudsley 28, and Esquirol 25.

These figures vary widely. They vary with the amount of prevarication and untruth practised by the relatives of the insane, and it is to be feared that until human nature becomes something different from what we know it to-day, or

until families are compelled by law to keep some kind of family record, little more than we at present know on this most important subject will be learnt from statistics. From education, the modern cure for all ills, we can expect nothing, for we find that in the upper classes, where education should be most advanced, truth upon this one point at least is less plentiful than among the ignorant.

The Commissioners' summary of the whole number of persons certified as insane in 1887 shows that in spite of error, accidental and premeditated, close on a fourth—23 per cent.—were by heredity predisposed to insanity, while of the total admissions for the ten years 1878 to 1887 inclusive, in 20·5 per cent. inherited taint was admitted.

With our present knowledge we can say positively that a great part of the insanity and other nervous disease which afflicts all civilized people is the direct result of hereditarily transmitted predisposition. Nor can it be doubted that the tendency of the age is toward the cultivation and spread of these hereditary diseases, for while our artificial life, with all its feverish haste and worry, is prolific of nervous degeneration, the customs of civilized society, as at present constituted, are designed to bar the course of Nature and prevent, so far as is possible, the operation of those laws which weed out and exterminate the diseased and otherwise unfit in every grade of natural life. The beneficial, or let us say the hygienic, working of these laws we see among the more savage races, where the mode of life is less artificial than our own; that is, where the individual is in more perfect accord with his environment than is the case among the more highly civilized communities. Even here in natural life we occasionally meet with the unfit (for the unfit is a variation, a pathological variation, and variations, both pathological and physiological, must of necessity appear at times even under the most favourable conditions), but when such variations from the normal or healthy type do appear in natural life their survival is of brief duration. Here natural selection remorselessly weeds them out, and so prevents contamination of the race. It is by this means the high standard of health is maintained amongst savage and semi-civilized races and all through the inferior animal world.

How different is this from what obtains in the artificial life which civilized man has created for himself. With him the weakling and the diseased, who in the natural state would at once succumb, are nursed and protected; they are surrounded with an artificial environment designed to render a

continuance of life possible; and finally, if they be endowed with the procreative function, they are permitted to beget their like. We make an attempt to hold Nature at bay. We fight and struggle with all our strength against the inexorable law which condemns the unfit to extinction. Fortunately for the race, however, our greatest success can only be temporary. At best we can but for a little time put off the evil day—if it can be called evil—and where is our gain? In the more primitive and natural conditions of life the weakling is at once removed because of his inherent weakness—his unfitness, his inability to suit himself to his surroundings—whereas we in our wisdom struggle to postpone that consummation, and frequently it is not until one, two, or perhaps three generations of suffering wasters have fretted and wept their hour upon the stage that we stand aside, unable longer to bar the path, and see Nature do her work.

I do not for an instant intend to question the righteousness of these endeavours of civilized man on behalf of his afflicted brother. Upon that great question we shall not venture. We can but admire the beauty of the unselfish spirit which prompts his action, and regret that Nature vouchsafes him such a sorry reward. Our business at present is but to point out that by this means disease is being propagated, and that much avoidable suffering is thus created.

All hereditary diseases tend toward extinction of the family, and for this reason are only to be found in perfection where the laws of Nature are interfered with. It would be impossible to cultivate in natural life a family bearing even such an apparently innocent abnormality as, say, colour blindness, for the individual in whom the condition first appeared would undoubtedly fall a victim to some enemy early in life, and so the abnormal character would be lost. Even in civilized life the necessarily fatal type is reached sooner or later if reversion to the healthy type be not secured by crossing with the healthy. In this way Nature ultimately rights herself in all cases by setting her veto upon the perpetuation of disease, and were it not for the suffering experienced before oblivion is reached, nothing need be said. The erring might be left to their fate. But this suffering, which is serious even in natural life, becomes grievous in these days of the higher civilization when those who owe their continuance in life to the exertions of others are not only permitted, but are aided by every device known to science to propagate their kind. Nowadays, when the maniac, the melancholiac, and the would-be suicide of yester-

day, the imbecile, the epileptic, and the habitual drunkard are married, and given in marriage, the suffering has become so terrible, the contamination of the race so great, and the care of the useless offspring begotten so heavy a charge upon the community, that if some effort be not made voluntarily to stay this curse upon the land the legislature must be called upon to interfere. At present, except only the idiot and the raving maniac, who in the eye of the law are unable to make a contract binding on themselves, there is no one so diseased, crippled, or deformed that he or she may not marry and become the parent of a suffering, helpless family, so far as the law is concerned. That this should be so is a scandal upon our boasted civilization. As Dr. Benjamin Ward Richardson has wisely said, "The first step towards the reduction of disease is, beginning at the beginning, to provide for the health of the unborn. The error commonly entertained, that marriageable men and women have nothing to consider except wealth, station, or social relationships, demands correction. The offspring of marriage, the most precious of all fortunes, deserves, surely, as much forethought as is bestowed on the offspring of the lower animals. If the intermarriage of disease were considered in the same light as the intermarriage of poverty, the hereditary transmission of disease, the basis of so much misery in the world, would be at an end in three, or at most four, generations."*

Let us see how the present system works among the insane, 50 per cent. of whom it is not too much to say have inherited their disease. Take the case of a young man who in consequence of inherited nervous instability becomes insane; he is treated in an asylum, and as soon as he recovers from the acute attack is discharged, however bad his family history may be. Being naturally impulsive and emotional, and having but slight control over his passions, he not infrequently marries early—perhaps a very short time after his discharge—and when he returns to the asylum, as he is almost certain to do, he is probably the father of two or three children. Again he recovers, and again he returns home to beget a tainted race. Ultimately he may return to end his days in the asylum, but before that stage in his downward course is reached he has probably left a large family behind.

Or take the case of a woman cursed with a bad inheritance. She marries, becomes pregnant, and, unable to bear the strain thus thrown upon the system, her mind gives way, and for a time

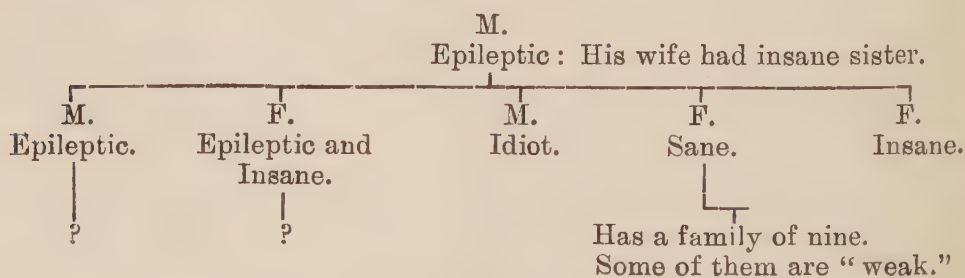
* "Diseases of Modern Life."

she becomes an inmate of some asylum. In the majority of such cases she, too, recovers for a time, and goes out into the world to bring forth perhaps a large family loaded with a double allowance of original sin. No asylum is without scores of such cases. They make up a large part of our moving population, men who beget families in the intervals between attacks of mania, melancholia, of epileptic excitement, and women who return to the asylum time after time, each visit following, or in some cases preceding, the birth of an unfortunate child.

Now this procedure can have but one result, and that is the propagation of insanity, idiocy, suicide, epilepsy, chorea, neuralgia, and like nervous diseases.

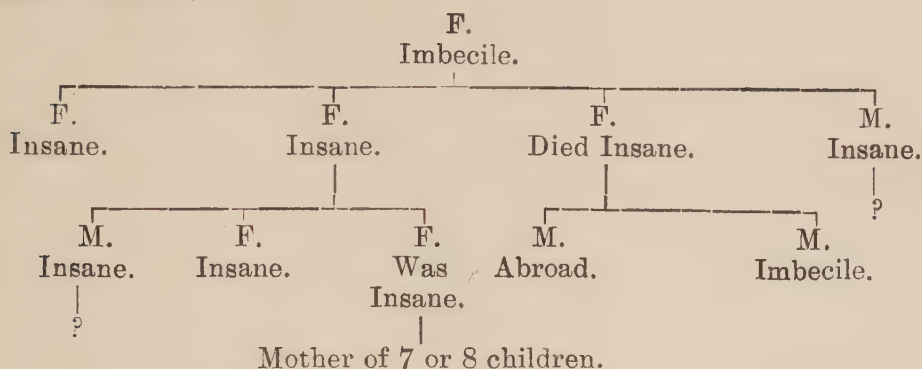
During the past ten years (excluding idiots and those discharged not recovered) there has been an average of 5,500 persons discharged from asylums annually. Taking the males with the females, it is not too much to say that 50 per cent. of these are within the procreative epoch of life. With that I think you will agree. Here, then, we have 2,750 persons who have actually been insane annually turned loose to act as parents to the next generation; 2,750 centres of infection deliberately laid down, and yet we marvel that nervous disease increases. Quatrefages says: "Man is subject to all the general laws of nature. The law of heredity is one of those from which he cannot escape."* Man is aware of this fact. Yet while he takes the greatest care not to violate this law of nature in the breeding of his horses and cattle, and even his dogs and cats, for some inscrutable reason when it becomes a personal question he ignores this fundamental law, and every year thousands of children are born with pedigrees which would condemn puppies to the horsepond.

Take the following two cases which have lately come under my observation. They are good, but by no means rare or extraordinary examples of what is constantly going on around us. Here are the two family trees:—



* "Human Species."

Second case :—



Now what would the world have lost that it could not well have spared had the ancestors of these wretched families been forbidden the right of procreation? Nothing. It would have escaped an inestimable amount of suffering, past, present, and to come: a considerable amount of pauperism and consequent tax-gathering—that is all.

In view of the conclusive evidence we now possess of the hereditary transmission of so terrible a disease as insanity—a disease whose ravages in society scientific men and economists alike deplore, and whose increase under the present state of things medical science is unable to stay—I think the time has come when something should be done to limit its propagation. This is to be done in one of two ways: either by educating the people, or, as a last resort, calling in the aid of the legislature. Ultimately, I fear, the latter course must be adopted, for the reason that many of those who aid in this propagation are actuated by sordid motives, as rank and wealth, rather than ignorance, while many of those bearing the insane diathesis are so impulsive and ill-balanced that they are at most semi-responsible, and with these the teaching of science, however convincing to the thoughtful, can never have any great weight. Sir William Aitken says: “Legislative enactments regarding the intermarriage of persons tainted by disordered intellect are greatly to be desired; and the concealment of such disorder with a view to marriage ought to render marriages null and void which are concluded under such circumstances.”* The legislation here suggested should be framed to meet the requirements so far as is possible of three distinct classes of propagators of the insane diathesis, viz.: 1. The unwilling propagator. That is the man or woman who has been entrapped into marriage with a tainted person by fraudulent concealment of the fact. 2. The criminal propagator,

* “Science and Practice of Medicine.” Seventh Edition.

as I would call the person who for sordid or selfish motives wittingly enters into marriage with a tainted person, and 3. The natural propagator, under which head would come all those who have already been insane, all confirmed epileptics and drunkards, and all those who are so ill-developed or tainted that there is not what might be called a reasonable chance of their offspring being healthy.

No one will say that for the first class legislation is not required. The person who has been induced to marry a tainted person by concealment of the fact should have relief as Sir William Aitken suggests. Concealment of the existence of such family blight in these circumstances is a fraud. It is a moral wrong, and should quickly be made a legal one. This fraudulent concealment, deliberately practised as it too often is with a view to marriage, should be sufficient ground for nullification of the marriage contract. I believe if a Bill were at present brought forward with this object it would receive the support of both the scientific and legal schools of thought.

The second class, which would be most difficult to reach, is made up of those who, well knowing the family history of the tainted one, disregard it. This disregard arises from various causes. In some cases it is the result of ignorance, and here from education we may anticipate good results. In some others it arises from gross carelessness, which is nothing short of criminal, and should be prohibited. But in the vast majority of those cases in which this law of nature is wilfully disregarded, the offenders are guided solely by sordid and selfish motives, as social elevation and love of wealth. In all civilized countries, even in the highest families—not excepting royalty itself—we find men and women for their own personal aggrandisement deliberately, I had almost said with malice aforethought, entering into marriages which can only end in disaster to the luckless children.

When the day of tribulation comes, some of these, falling back on puling sentiment, assert that they were led by love's legendary single hair, but such are not to be believed. A bow-string would not drag a right-thinking man or woman to such a fate. Others, who might be called the quasi-religious, throw all responsibility on Providence. These are selfish creatures, who for their own ends refuse to understand that Providence, having established benign laws for the government of His creatures, will not stultify Himself by staying those laws at the cry of those who have wittingly violated them. In all these cases, high and low, selfishness pure and simple is the

motive power, and the strong arm of the law should be invoked to prevent, as far as possible, such selfishness saddling the community with a helpless, worthless offspring.

The third is by far the largest and consequently most important class. This class claims our sympathy, but we must not permit our pity to overbear our reason. It is better that one generation should suffer than many. If this class could for one generation be forbidden the right of procreation, the effect upon our insane population would be enormous, and the world would lose nothing worth having. Dr. Maudsley has said that in forbidding the marriage of those of the insane temperament, we should be to a certain extent stamping out genius, but the species of genius which occasionally springs from the insane family is not of the most useful order generally, and I would venture the assertion that there is not sufficient probability of the insane enriching the world by begetting the genius to justify him in hazarding the experiment.

I have seen a man whose mother was an imbecile, whose sister was an idiot, and who was little better himself, come to visit his wife and wife's sister—whose mother had also been insane—who were confined as lunatics in the same asylum in which his idiot sister resided, and I have watched this creature, the father of three children, laugh gleefully at the antics of his relatives in the visiting-room. Shall we expect genius from such as this? There are thousands of just such ill-developed men and women in the country, and these we can only hope to guide by force. Education is all very well in its place, and it must have a beneficial effect among those who have sufficient mental development to appreciate the evil under which their families labour, and who have sufficient strength of will to enable them to choose the good rather than the evil, but with those like the man I have mentioned, it is useless to plead, only coercion will keep them in the right path. They attend upon the calls of their instincts and passions as does the unreasoning beast, and not even an angel from Heaven could hope by moral suasion to induce them to curb a single appetite or in any way mortify the flesh.

Of course the old cry of "interference with the freedom of the subject" will arise like a spectre to bar the path of legislation, but this ghost has been laid before and will be again. These wretched creatures far down in the scale of degeneration, with just sufficient intelligence to keep them from outraging the usages of society, who create nothing, add

nothing to the commonwealth, but are instead a charge upon the community; these have no more right to claim freedom of action as to procreation than has the leper to mingle with the populace.

All men and women who have been insane once and have a bad family history; those who have been twice insane, even if the history be good; and all who are confirmed epileptics or drunkards, should be prevented by the State from becoming parents. These people have no more right to carry suffering and contamination amongst the people than has the person suffering from small-pox to do so by travelling in a public conveyance. As with the victim of the small-pox, it is their misfortune more than their fault, but of this society can take no notice. The unfortunate few must always suffer for the benefit of the many. It should be the duty of the State to see that such unfortunates are protected and cared for, and that their lives are made, so far as is possible, useful and happy, but that they should be permitted to hand down their disease to innocent children any more than the sick one should give his small-pox to his neighbour is unfair to society and to the race.

*Does Mania include two distinct varieties of Insanity, and should it be Sub-divided?** By GEORGE M. ROBERTSON, M.B., Senior Assistant Physician, Royal Asylum, Morningside, Edinburgh.

The first difficulty one meets with in deciding these points is in knowing exactly what is meant by mania. Pinel's definition of mania† was insanity, marked "by a strong nervous excitement" of the mind and body, "accompanied by lesions of one or more of the functions of the understanding."‡ Melancholia was distinguished from it, by there being "no propensity to acts of violence," and by the insanity being "exclusively upon one subject."§

Pinel thus divided insanity into two forms, one of which was accompanied by excitement, and the other was without excitement, the insanity in the latter being also only upon one subject. It is obvious that we do not now understand the

* Paper read at the Quarterly Meeting of the Medico-Psychological Association, held at Manchester, March 13th, 1890.

† His *Manie avec Delire*.

‡ Pinel, "Treatise on Insanity," translated by Davis, p. 159.

§ *Ibid.*, p. 149.

terms mania and melancholia in the same sense as Pinel understood them, for all our writers on insanity at the present day include a consideration of the emotions, at all events in their definition of melancholia. Pinel, however, referred to the emotions in his definitions, and by so doing he recognized their importance, yet he did not take the emotions into consideration in distinguishing his mania from his melancholia.

Esquirol, who followed Pinel, was the first to thoroughly recognize the importance of differentiating the emotions in his forms of insanity, but unfortunately he was not able to emancipate himself completely from the shackles of the ancients, and still gave an undue prominence to the presence or absence of excitement. Excluding conditions of dementia, he divides insanity into three groups* :—

1. “Melancholia,† in which the insanity is partial, and there is the predominance of a sad and depressing emotion.

2. “Monomania, in which the insanity is partial, there is the predominance of a gay and expansive emotion, and there is excitement.

3. “Mania, in which the insanity is general, and there is excitement.”

The writings of Esquirol have to a very large extent moulded the opinions of alienists up to the present day, but curiously enough, not one of these three forms of insanity is understood at the present time in the same sense as he held it.

Melancholia at the present time is almost universally recognized to include a variety accompanied by excitement, and though Esquirol has described this form clinically, so controlled was he with the idea that excitement meant mania, that he included this form under mania, though he refers to it as maniacal melancholia.‡ Griesinger§ has the same difficulty, though he distinctly recognizes the clinical type, and so also Bucknill and Hack Tuke. These last two writers remain undecided whether these cases should be called “acute mania with melancholic depression, or acute melancholia with maniacal excitement.”||

Clouston, Savage, Bevan Lewis, and Blandford, all recognized active, motor, or excited melancholia as an important variety of that form of insanity. This may be taken to illustrate the

* Esquirol, “*Maladies Mentales*,” p. 22.

† Or *Lypemanie*.

‡ Esquirol, “*Maladies Mentales*,” Vol. i, p. 404.

§ Griesinger, “*Mental Diseases*,” p. 298.

|| Bucknill and Tuke, “*Psychological Medicine*,” p. 435, 4th ed.

tendency of the present age, which regards motor excitement as subsidiary in a basis of classification, yet it has taken 2,000 years to displace this hippocratic idea. Melancholia, as understood by the majority of writers at the present day, may be defined simply as insanity accompanied by mental pain or emotional depression. The question of excitement or no excitement, of partial insanity or complete, has gone, and a pure emotional definition has asserted itself. Excluding from our consideration all conditions of dementia, we can now arrive at a definition of mania, which, in a few words, may be said to include all forms of insanity not accompanied by feelings of depression or mental pain.

It is assumed in this definition that there are but two forms of active insanity, mania and melancholia, and this assumption is confirmed by the fact that they are the only two forms recognized in the nomenclature of the College of Physicians, and that Bucknill and Hack Tuke quote with approval the statement of Griesinger that "all classification must in the end return to the principal forms of insanity, mania—whether acute or chronic—melancholia, and dementia, "because they are really founded on nature." *

Mania, according to the definition that has been given of it, is a very wide sub-kingdom indeed, and it could with truth be asserted that there are many more than two distinct varieties of insanity included in the term. We, however, believe that even in this extensive sense, mania might with propriety be divided into two natural and physiological groups. But as this would bring in many debatable points, altogether unconnected with the principle of classification that we are advocating, we shall narrow the extent of the term.

In all text-books of insanity, without exception, there is a form of mania in which the condition of *excitement, motor and mental*, forms an integral part of the definition. It seems almost a work of supererogation to state this fact, as we in our every-day talk only refer to cases with excitement as mania, and the terms were regarded as almost synonymous till Pinel's time. We have shown that this is not so now.

It is in regard to this form of mania with excitement which may be taken as our ordinary practical notion of mania, that the following observations are written.

We have seen that melancholia is now almost universally defined by an emotion, and it has been found by practical experience that it is a most satisfactory basis for grouping

* *Ibid.*, p. 51.

numerous apparently dissimilar forms of insanity. The question at once occurs, Why is this basis not more extensively adopted, and could we not in as satisfactory a manner define mania? If we now attempt to discover what uniform emotional condition runs through all our cases of mania, we find it impossible to reconcile mania with one emotional state. It is indeed true that there is an impression that mania is the converse and the antithesis of melancholia, and Bevan Lewis, the latest writer on insanity, has stated this as a fact,* but if we put this to the test in practice we find that though all our melancholic cases suffer from a painful emotional condition, all our cases of mania do not labour under "exuberant joy, excessive hilarity, or an overflowing of the spirits in generous impulses." Nor do any of our recognized authorities admit that such is the case. Being baffled in this way, let us look upon the question in another light. If depressed emotion can become altered by disease into the symptoms of melancholia, do any of the other emotions become altered by disease, and constitute forms of insanity analogous to melancholia?

Among the fundamental emotions which in health are accompanied by the greatest amount of motor and mental excitement, there are three which stand out prominently and which constitute types under which most of the other emotional states may be classed. They are joy, anger, and fear. We know that states of fear when due to disease are classed under melancholia; under what forms of insanity are states of joy and anger classed? We find by investigation that they are classed under mania, and we find that all our cases of mania are in either one or other of these emotional states. In order to illustrate this fact, a description will be given of two varieties of acute mania, in which these different emotional states were evidently present.

The first variety, which I consider to be the pathological condition involved in the emotion of anger, may be termed *furious or raging mania*. These names have both passed into popular language, and show that the condition was recognized long ago. The mania that epileptics are occasionally subject to is usually an instance of furious or raging mania.

The expression of the face is one of rage, the eyebrows are corrugated, the eyeballs stare and protrude, and the face is flushed. The whole body is in a state of intense excitement, and the patient gesticulates wildly in a threatening and aggressive manner. He "tears his clothes to tatters, and destroys

* Bevan Lewis, "Mental Diseases," p. 163.

and breaks in pieces whatever comes in his way. Whoever touches the patient is abused or struck by him.”* The case is “marked by excessive destructive violence and utter regardlessness of personal danger,”† so that if controlled he fights with a savage fury that knows no permanent surrender. He is most dangerous to those around him. Nor is the patient silent; “his anger, violence, and loss of reason manifest themselves in their greatest intensity in shrieking, roaring, raging, abusive expressions and conduct towards the dearest friends and nearest relatives, who are now looked upon as the bitterest enemies.”‡ He indulges in “vociferous denunciations, loud and threatening language, rapid and impetuous utterance, harsh voice, imprecations, and stamping with the feet.”§ From out of his incoherent remarks the idea may be gleaned that he imagines himself surrounded by enemies.

Such is furious or raging mania in the very severest cases, but, happily, this variety of the disease is now rare. The above picture of the disease has been drawn from the descriptions of Prichard, Bucknill, Hack Tuke, and Savage, and it is the popular idea of the madman.

The other variety of acute mania, which may be called *hilarious mania*, is the type commonly observed in adolescent cases.

The expression of the face is one of exuberant happiness; very often there is a grin or a humorous grimace overspreading the countenance. There is here also great motor excitement, but it is of a boisterous, devil-may-care, rollicking description, like an exaggerated case of hilarious intoxication. The movements may be very violent and damage may be done, but all is done in good humour. The patient may dance, jump over chairs, kick everything near him, smash windows, or be constantly engaged in mischief of some form or other, but he is good-natured withal. His high spirits, besides finding outlet in muscular exercise, find expression in a stream of talk, more or less incoherent, sometimes blasphemous, almost always erotic, and, perhaps, rhyming. He is constantly whistling, shouting, or singing. Though often very troublesome, he is easily controlled by skilled and judicious management, and he is not regarded as dangerous by his attendants.

Descriptions of these two types of acute mania may be

* Chiaruggi, quoted by Prichard, *Treatise*, etc., p. 76.

† Savage, “*Insanity*,” p. 384.

‡ Chiaruggi, *op. cit.*

§ Bucknill and Tuke, *op. cit.*, p. 295.

found in most books on Insanity. The first two cases depicted in Sir A. Morison's "Physiognomy of Mental Disease" are of raging and hilarious mania, and two of Esquirol's three illustrations of mania clearly represent the same two groups.

The examples which have been given of these two emotional forms of mania are drawn from acute mania, and now similar illustrations will be taken from simple mania, in which the motor excitement is much less.

The first description, which is an account of the lesser degree of furious mania, is freely translated from Esquirol.* He says this variety of mania does not present the same degree of excitement and violence as the last. Everything seems disagreeable to these patients, and everything seems to irritate them. They are extremely irascible, and they are excitable and most energetic. They are cunning, deceitful, lying, insolent, quarrelsome, and discontented with everything, even the most affectionate attentions. They grumble without ceasing, both of persons and of things; their loquacity is inexhaustible, and they almost deafen one with their talk. They may suddenly alter their manner and their language; they, however, always put a wrong construction on everything. Nothing pleases them more than to say and do the most disagreeable things. They strike others and bring false accusations; they delight in putting a bad construction on the best intentions, in inventing evil, in doing damage, and the more harm that they do the better are they satisfied with themselves.

This variety of mania which Esquirol has described is more common among women. They are those troublesome cases who have an unpleasant knack of making rude and unkind remarks, and who pass the time in scolding, and abusing, and stirring up strife. The motor and mental excitement are both toned down, but the feeling of antagonism and discontentment, which bears a relationship to rage, is always present.

We will now describe a much more pleasant condition, that of simple mania of the hilarious type.† The patients are unreasonably gay and happy; there is a great overflow of high, animal spirits, and they enjoy a sense of perfect health and general well-being. "They are satisfied with themselves, content with others, and seize upon the cheerful side of everything."‡ They are joyous, communicative, and very sociable.

* *Op. cit.*, Vol. ii., p. 157.

† The *Amenomania* of Rush, recognized as a distinct type by Bucknill and Tuke, p. 234.

‡ Esquirol, *op. cit.*, Vol. ii., p. 6.

They have a quick succession of ideas, and they indulge in a constant, chattering, fragmentary talk—full of absurd vainglorious notions of greatness, of riches, and of their happiness. Their conduct is extravagant and gesticulative, and apt to be childish in its effusiveness. They form a very great contrast to the last group; they are most agreeable patients to have anything to do with, and they infect one with their good spirits.

These four descriptions of mania which we have given fall obviously into two very natural groups. The mental and bodily symptoms of these two groups are quite distinct from one another, and can be distinguished from one another by the merest tyro when once the attention is directed to the emotional state.

In the one form the patient is dangerous or abusive, he treats you as an enemy, his delusions are of persecutions and plots against his welfare, and his ideas are of vengeance and retaliation; in the other form he is boisterous or happy, he overpowers you with his friendliness and familiarity, his delusions are of wealth and happiness, and his ideas run in an erotic, religious, or grandiose vein.

This difference in the emotional condition is of primary importance, and gives the characteristic colouring to both the objective symptoms of the disease and to the important subjective conditions.

If the above rather brief description of these forms of mania be true to nature, we maintain that the fact is established that mania includes two distinct symptomatological varieties of insanity. We will now, however, discuss some objections that may be made.

Some may say that the two states I have described are not really different, and that they resemble one another very closely. It is certain that they are not so distinct from one another as mania is from melancholia, but if they are essentially different, however closely they may apparently resemble one another, a scientific age like ours will not rest satisfied with confounding them together. As an illustration of this it may be again pointed out that we have only lately distinguished melancholia with excitement, from mania, and as regards apparent resemblance, there is certainly no doubt that excited melancholia bears a closer likeness to mania than it does to passive melancholia.

It may also be said that the two forms, though they undoubtedly exist, pass so readily into one another that they cannot be called “distinct varieties.” It must be confessed

that hilarious mania may pass temporarily into furious mania, but is it not the case that it may also pass into a temporary melancholic condition, as indeed it frequently does in adolescents, yet no one would assert that as a reason for destroying the latter distinction. An insane person has loss of self-control, and so if a hilarious maniac receives ill-treatment, it is very probable that he will get angry and pass temporarily into a condition of furious mania. There is, however, an essential difference underlying these two conditions. The latter was set up by an outside cause and will disappear eventually after the cause is removed, whereas the former condition, that of hilarity, is independent of external causes, and is a symptom of the brain disease.

A third objection may be urged, which is, that there is a form of mania, sometimes called delirious mania, in which there is intense excitement and absolute incoherence, and which, owing to the great dissolution of the mental functions, is accompanied by no apparent emotional state. This fact must be admitted, and it may be regarded by some as a weakness in the emotional classification. It cannot be denied, however, that this condition of delirious excitement is almost always a sequence of excitement accompanied by an emotional state, either of anger, joy, or fear.

The three forms of emotional insanity, furious mania, hilarious mania, and melancholia, approach one another and become fused at their two opposite extremes. Thus they may all pass into delirious excitement at the one end, or they may all pass into stupor at the other extreme. Delirious excitement and stupor are allied to conditions of amentia, as there is little or no mental action, hence a psychological basis of classification, like the emotional state, has difficulty in including them.

In conclusion, some authorities will be quoted whose opinions support the views advanced in this article. In the first place, Griesinger states that in mania and melancholia the fundamental affection depends "upon ruling emotions, which secondarily involve the intelligence,"* "and under the influence of which the whole mental life suffers according to their nature and form."†

This great authority thus recognizes the fact that mania is fundamentally an emotional disease, hence it would seem desirable that it should be defined on an emotional basis. Bucknill and Tuke, while corroborating the above statement

* *Op. cit.*, p. 319.

† *Op. cit.*, p. 207

as to the emotional origin of mania, mention that "although mania in many instances is a prolonged anger, it may likewise be altogether pleasurable in its manifestations, presenting a condition of exhilaration and uncontrollable excitement, in which the patient is rather mad with joy than anger."* These two authors have gone a step further, and have given indications as to the exact emotions which should be adopted in defining mania.

The writer, however, who has most nearly adopted the emotional classification is the great Esquirol. It has already been said that Esquirol laid too much importance on the fact whether the insanity was partial or general, and also on the presence of excitement, although in the latter respect he discriminated somewhat† and was in advance of his contemporaries. If one allows for these two mistakes in his classification, we find that it is one founded on an emotional basis exactly similar to what we are advocating.

His melancholia, to be complete, requires the addition of excited melancholia; this form he excluded because there was excitement, and the insanity was general.

His monomania corresponds exactly to our simple hilarious mania, and to this must be added acute hilarious mania, which Esquirol excluded from this group because the insanity was general.

His mania, deprived of excited melancholia and of acute hilarious mania, would correspond to our furious mania.

One may ask what has become of monomania, in the sense that Esquirol held it. We find that it has been absorbed under mania by the modern school, and this, no doubt, because of the erroneous notions of it handed down to us. (See note.)

This sub-division of mania then, which we have been advocating in this article, into furious mania or *mania cum furore*, and hilarious mania, or *mania cum hilaritate*, is but a return, with some modern ideas, to an older classification, but the principle it involves is very important.

NOTE.—Esquirol invented the term monomania, but his meaning of the term was totally different from the descriptions Sir A. Morrison‡ and Prichard§ gave of it, though he himself is partially responsible for this confusion. In his monomania|| the insanity was partial, there was a joyful emotional condition, there was excitement, its course was quick and of short dura-

* *Op. cit.*, p. 293.

† *Op. cit.*, Vol. ii., p. 134.

‡ "Lectures on Insanity," p. 172.

§ "Treatise on Insanity," p. 26.

|| *Op. cit.*, Vol. i., p. 22.

tion, and it was curable,* indeed, its termination was more favourable than that of melancholia. It sometimes passed into mania. It corresponded with Rush's amenomania,† and to the modern simple mania accompanied by hilarity.

CLINICAL NOTES AND CASES.

The Life History of a Malinger Criminal. By JAMES MURRAY, M.B., Assistant Medical Officer, H.M. Prison, Wakefield.

It is a truism that to detect disease is in many instances more difficult than to cure it. In general practice how often do obscure subjective symptoms in a patient puzzle the diagnostic acumen of the most experienced of our clinicians, and how often does the post-mortem table prove that "to err is human" in matters medical!

In no branch of medical practice is it more necessary to reason out one's conclusions than in the prison medical service, as nowhere does the fact of illness existing have so important a bearing on the treatment of the individual. The medical officer has a double duty to perform in his official capacity, and has to keep an open unbiassed mind on his daily rounds, and on each separate case, so that on the one hand a "skulker" may not by his means escape his due punishment by feigning disease, and on the other hand that proper medical care and treatment may be granted to those who are really ill and require medical attention.

It does not require very much prison experience on the part of a criminal to find out how important an influence on his welfare the medical officer exercises during his period of incarceration, and what powers of conferring increased comforts the law places in his hands, and many consequently are the devices met with to accomplish those ends. With the help of stethoscope, thermometer, and weighing machine, most of these applications, however, are determined at their true value.

One cannot, however, be too careful before arriving at a complete diagnosis of malingering. Ogston in his "Jurisprudence" says "Serious diseases are known to exist in a latent form with little or no manifestation during life, and are only

* *Op. cit.*, Vol. ii., p. 31.

† See Bucknill and Tuke, p. 234.

to be detected on inspection after death. A person thus labouring under disease in this form might readily be treated as an impostor." Also there is present in most cases of determined continued malingering some defective mental or bodily condition, which may, or may not, have a direct bearing on the disease feigned. The malingerer is usually a confirmed criminal—in itself evidence of depraved moral tendency—is often distinctly neurotic and exhibits a patience and cunning truly remarkable, and often of his own initiative endures discomforts and deprivations with great *nonchalance* satisfied if only he at last attains his desired result.

Of the diseases most favoured by the schemer a marked preference is shown—presumably from an indefinite notion of their difficulty of detection—to mental and nervous diseases generally, and of these in particular to epilepsy and paralysis.

Many cases require prolonged careful observation, and though occasionally the medical detective is outwitted, yet as a rule his superior education, ingenuity, and knowledge of disease enable him to circumvent the schemer.

The following is a case of considerable interest in many of its aspects, as the man, whose history is given, was observed by many medical men, trained by long prison experience in the detection of schemers, who almost unanimously designated him a "confirmed malingerer." I have also been able to obtain a fairly complete family history, and account of his general conduct and habits of life while at liberty, and thereby to complement his medical history while in prison.

W. H. T., *ætat* 43, was committed to this prison on November 2nd, of last year, to await his trial at Assizes on the charge of larceny of ducks. The policeman who brought him said that he had had a "fit" while in the train, but had walked from the station to the prison without complaint. Immediately after reception to the prison he had another "fit," described by a warder as consisting of his throwing himself over from side to side, considerable drawing of head to right side, and firm clenching of the hands. No epileptic cry, foaming at the mouth, nor markedly heavy breathing after "fit." He was carried into the reception room of the prison, and Mr. Clarke, the medical officer, who was on duty at the time, was sent for. He found him lying on the floor, with eyes closed—no marked stertor, conjunctivæ sensitive to the touch, and pupils to light; distinct resistance to raising eyelid was felt. He answered no questions, and limbs, on being raised, fell powerless and limp. He was sent to Hospital for further observation. From the above date till November 11th his condition was as follows: He lies on his right side on a mattress, placed on the floor. He has milk and beef-tea, which

he swallows readily from a feeding-cup. He has had on an average five or six "convulsive" attacks daily; the description of those with him tallies with that given above. The fits occur chiefly at night. He has not spoken to the nurses or warders since reception. He lies almost motionless, but follows with his eyes the motions of the officials who enter the room. When asked to move arm or leg or to obtrude tongue he shows no attempt to do so. Sensibility in extremities seems well under his control or dulled, as it requires fairly deep prick with pin to cause any contraction. Reflexes are present. Pupils are sensitive to light and reflexly, and conjunctivæ sensitive. When desirous to micturate or defæcate, he moans and makes inarticulate sounds to the nurses.

In discussing the case in his presence, marked surprise was expressed at the absence of frothing at the mouth and of expulsion of the contents of the bladder during his violent convulsive attacks, and special attention on the part of those with him was directed to these points. The result was that on our next visit we were told that the following fits had been accompanied by both those symptoms, although previously neither had been present.

The whole history of the case pointed to but one conclusion—that the man was feigning epilepsy and paralysis—and he was accordingly put in a separate cell in Hospital, on the 11th. Up to that date no previous history had been obtained, nor had we recognized him as a former prisoner. On the following day he was recognized by one of the officials as having been in custody before, and several facts were brought to our notice which were strongly confirmatory of the diagnosis formed. The strongest proof of any, however, as to his having retained the perfect use of his limbs was afforded by his self-destruction, the *modus operandi* of which was as follows: On the evening of the 14th, in the interval between two visits by a warder, he was able to rise from his bed, tear his bed-clothes, and join the strips together, place his cell-stool under the window, rise on it and step from thence to the window-ledge, balance himself on it (about three inches broad) while he opened a ventilating pane of glass in the upper half of the window, and tied his rope to the bars outside; and finally after making a noose in the free end of his rope and inserting his head in it, to kick his stool clear. He was found hanging thus on the warder's next visit, and though immediately cut down and restoratives applied, was found to be quite dead.

The above was his history when last detained in this prison. Inquiries which had been set on foot in regard to him while under observation revealed a considerable part of his previous history, which is interesting and instructive.

The clergyman of his native parish, in answer to a communication on the subject kindly sent by my friend and colleague, the Rev. Aspinall Addison, wrote as follows: "He was notorious for his pilfering habits . . . but he had been brought up to steal from child-

hood by a most dishonest mother, so that I think he had hardly any idea, but the very faintest, that stealing was morally wrong. Moreover, I believe that he had incipient insanity, and the man's cunning confirms this impression. His mother, I am told, was affected in the same way. He had no brother or sister. Of his father I have no information. He was always perfectly civil and obliging to me, and very willing to do a kindness. His habits and conduct were eccentric. He did a little work, but only a little, and it would have been wonderful how he managed to make a living had not the explanation been so obvious."

The police superintendent of the district was applied to in regard to his assumed epileptic tendency, and answered: "I have made inquiry as to whether he was known to be subject to fits in his native district. I cannot find that he has ever had a fit in reality, but it was no uncommon thing for him to throw himself down and lie for a long time to make people believe that he was unconscious. This was generally done when he was in trouble. When in custody here on a previous occasion he said he was very bad with heart disease. When last in custody this complaint had left him, but he said he had had several fits during the night. I did not, however, see him in any of them."

The most important communication I received, however, was one kindly sent me by the Medical Officer of the district in which he lived, and was as follows: "He was in the habit of frequently stopping me and asking me to prescribe for rheumatic pains in back, pleurodynia, or pruritus. I never saw him in a fit. About midnight one day I received a letter from the overseer of the parish saying that T. had been attacked by a neighbour, and had received severe injuries as he was unconscious. On arriving I noticed that he had received a couple of black eyes and was laid on the floor feigning unconsciousness. Conjunctivæ and pupils were sensitive, but he would not answer when spoken to. I told the overseer that he was shamming, and that he had better be removed to the Workhouse next morning. This was accordingly done, but not without strong protest and opposition on the part of the man, who threatened to take a summons out against the overseer. The same day he discharged himself from the Workhouse, and walked home, a distance of three miles. He was an illegitimate child. His mother was a most untruthful woman, and was addicted to petty pilfering. His father was a member of a very neurotic family. His paternal aunt committed suicide, a sister a deaf mute, and a brother was confined in an asylum. There is no family history of epilepsy or phthisis."

The above three notes throw a strong light on his history while at large, on his habits, domestic relations and hereditary tendencies. His father's relations show a distinct tendency to mental defects, his mother is a petty criminal, and of generally loose morality. He is born and bred under depraving influences, and at an early age he drifts into crime, and I find him in 1863—being then 17 years of age—having his first conviction recorded.

The following is his criminal record from that time till the date of his death :—

<i>Date.</i>	<i>Charge.</i>	<i>Sentence.</i>
Feb. 23, 1863	Fowl stealing	14 days.
Mar. 14, 1864	Ditto	6 months.
Jan. 6, 1866	Stealing wearing apparel	12 months.
April 28, 1868	Damaging apple trees	6 weeks.
Nov. 3, 1869	Stealing quicklime	7 years penal servitude.
Mar. 22, 1881	Attempted bestiality	Discharged.
Sept. 28, 1883	Larceny	Ditto.
Jan. 18, 1887	Damaging church window	1 month.
Nov. 2, 1889	Stealing ducks	For trial at Assizes.

His conduct in prison on his first sentence was good, and nothing noteworthy occurred during that period.

On his second conviction he did not behave well and had as many as twelve reports rendered against him for misconduct on different occasions, chiefly for idleness and laziness. There is no note of his having made any complaint as to his health up till this time.

His next sentence is one of twelve months' hard labour, and he is reported on as follows by the Medical Officer: "He was sent to prison on December 19th, 1865, to await his trial at Sheffield Sessions. On December 30th, he was admitted to hospital for wound of the scrotum, supposed to have been done (as he said) by accident with the night pot in his cell. On the 6th of January he was taken to Sheffield and committed for twelve months. On January 26th, he was discharged from hospital—the wound being perfectly healed—and in the evening of the same day was admitted again, having re-opened the wound with his fingers. On March 21st he was again discharged from hospital, the wound again having healed, and in the evening of the same day he again re-opened it. He was ordered to be kept in his cell under restraint and continued there till the 25th, when he was again sent to hospital and remained there till April 16th. He was then discharged, and ordered to have his usual exercise, but to have the cuffs on while in his cell. In the evening of the same day he was found by one of the officers attempting to re-open the wound with a table in his cell, and had again to be sent to the hospital. Again he was discharged from hospital on July 10th, only to be re-admitted on the 12th for the same reason." He continued in hospital until October 25th, when he was finally discharged and remained at ordinary labour till the date of his discharge from prison, January 3rd, 1867. The Medical Officer's opinion of him is summed up in the following note on the expiration of his sentence: "In the early part of this man's imprisonment he was a perfect nuisance. Latterly, he has conducted himself better, and has shown that he is capable of behaving himself properly, and therefore ought to be punished when he misconducts himself."

He is next sent to prison in April, 1868, on a sentence of six

weeks' imprisonment. On reception, he complains of diseased lungs and cough, and is sent to hospital for examination and observation. Here he remains during this whole period, but on discharge the Medical Officer considers him "healthy" and "a thorough humbug."

In November, 1869, he is again committed to prison and sentenced to penal servitude for seven years. The first few months of the sentence are spent in Wakefield, and on removal to a Convict Prison, the following note is sent with him: "He has been exceedingly troublesome while here, and has on several occasions cut and injured himself in order to be sent to hospital. When not in hospital he has frequently sent for the surgeon in the night, and at other irregular hours." The same course of conduct seems to have been sustained in the different convict establishments to which he is sent. In each he found his way into hospital, where he remained for varying periods—the diseases affected being many—from "bruise" to "epilepsy," but being chiefly described in the medical reports as "anomalous," "observation," and "malingering." On the other hand, the following note by one of the Medical Officers explains itself. March 2nd, 1871: "At this time a confirmed and very cunning malingerer; was cured by corporal punishment. Has latterly behaved very well." He was eventually discharged in good physical condition on the expiration of his sentence.

He does not again appear in the prison records until September, 1883, when he is sent to Wakefield Prison to await his trial at the Assizes. Immediately on reception he is taken ill, and is at once seen by the assistant-surgeon, who notes that "he sat in a box and seemed at his last gasp. His head was lying back, and there was a streak of blood from his mouth back to his right ear. He gasped a few words and said that he had been kicked on the testicles by the policemen. No marks of "kick"; pulse good, but quick; skin cool, and body well nourished. He was, however, sent to hospital for observation, and remained there while waiting his trial, but did not return to prison, as he was acquitted of the charge. The note on discharge was "a confirmed malingerer."

His next committal to prison is in January, 1887. On reception, he complained of "fits" and general pains, and next day sent urgently for the surgeon, complaining of intense abdominal pain and inability to micturate. He also stated that he had injured his scrotum three weeks ago, and showed the scar of the self-inflicted wound of 1865 as the result of that injury, also stating that since then (three weeks ago) he had suffered from difficulty of micturition and hæmaturia. He was sent again to hospital for observation, and remained there during the rest of his imprisonment. On discharge, the note is: "Has felt better each day as his term of imprisonment expires." On this occasion he did not confine himself to urinary symptoms, but was "very hypochondriacal and always grumbling." On his urine being found normal, he transferred his suffering to the

stomach and upper part of the abdomen. Nothing definite, however, was detected in his case, and he was undoubtedly again malingering.

This completes his history, as he did not again come under notice until November, 1889, when, as related above, he committed suicide. Out of a total imprisonment of (excluding his first two sentences, when he had evidently not learned to malingere) eight years and 107 days, he spent four years and 114 days in hospital. In the various prisons in which he was located he must have come under the notice of from twelve to twenty medical men, all with special experience in the detection of feigned diseases, and although to many of these he was known as a confirmed malingerer, yet he was evidently treated on the assumption that actual disease might have been present, and retained in hospital under observation until all reasonable doubt was dispelled. The only temporary cure for his disease seems to have been the flogging which he received; there is no record of his having been admitted to hospital for a period of 18 months after this event—the longest time, by far, in his prison history during which he performed ordinary prison labour. During all his prison life his general physical condition seems to have been good, his weight varying from 140 to 152 lbs.; only on one occasion does he seem to have lost weight, and then only for a few weeks. His mental condition seems to have been questioned only on one occasion—during his period of penal servitude—when he is reported as “weak-minded and under observation.” This, however, seems to have been very temporary; no delusions are ever noted as being present, and he is soon transferred to ordinary penal conditions.

As a psychological study this man's case is very interesting and important. His hereditary acquirements are unsound, mentally and morally. Himself the product of a neurotic father, and a most immoral mother, his domestic surroundings and upbringing do not conduce to correct his congenital tendencies, and he naturally grows up criminal and anti-social, idle and vicious. From the beginning of his prison-life he shows marked disinclination to settled labour or restraint of any kind, and finding that the only means of escaping his irksome duties is by personal defect, he mutilates himself and continues to do so whenever occasion requires. As he grows older and associates more with fellow-criminals he finds that less violent measures are quite as effective, and during the whole of the rest of his prison life—and in civil life when in trouble—he is full of complaints and illnesses.

That a "Mens sana in corpore sano" would continue for such a long period of time to attempt deception is improbable; ordinary experience among prisoners teaches otherwise. A flogging would have cured such, effectually and for ever, but in his case it had only a temporary effect. There is no evidence, at any time, of any definite delusion or hallucination, unless we assume the disordered subjective feelings to be due to intellectual disorder. His self-destruction is of some importance; no adequate cause can be offered for his suicide, unless the fear of another long period of penal servitude acting on a weakened mind created a sudden impulse which was carried into effect immediately.

Whether we believe in moral insanity, as distinguished from intellectual, or not, we must at least acknowledge that in this man's case all the elements of moral instability and depravity were well represented. To quote Maudsley in a recent number of this Journal,* he was "an essential or natural criminal—a criminal by reason of defective mental organization," "a specially manufactured article of an anti-moral and anti-social type—sprung from a family in which insanity existed;" "an instinctive criminal because the gratification of his urgent and absorbing self-regarding instincts was not, and could not, be checked by any sense of duty to others of which he was congenitally destitute, and constitutionally incapable." If we add to this a considerable amount of low cunning and dogged persistence in striving to avoid legally-imposed labour, we are enabled to distinguish the mental conditions under which he became a confirmed criminal and a successful malingerer.

Case of Hæmorrhage into Pons Varolii. By JAMES RORIE, M.D., Medical Superintendent, Royal Asylum, Dundee.

J. W.; female; æt. 25; single; domestic servant; Protestant; admitted from parish of Liff and Beuvie on 25th April, 1886.

Dementia.—Patient has been insane for $4\frac{1}{2}$ years. Her sister stated that the illness came on quite suddenly without any assignable cause. Was at first very confused, then became violent and outrageous, and had to be kept tied in bed. Has been so for $4\frac{1}{2}$ years. Has of late become much stronger physically, and was sent to asylum because her relatives were afraid they would be unable to keep her in bed if she got much stronger. Menstruated very severely before occurrence of her illness. Menses returned several times, but has been altogether absent for two or three years.

* "Journal of Mental Science," July, 1888.

In the medical certificates on admission Dr. Greig states: "The case is one of dementia. I found her tied in bed; refuses to answer questions or pay any attention to what is said." Dr. Miller certifies: "She is quite imbecile; during my visit she could not be induced to speak."

On admission patient was in a frail state of bodily health; very emaciated, especially her legs. Her feet were slightly deformed, especially the right one, and apparently from having been so long kept tied in bed. Has lost all ability to walk, and also apparently to swallow fluids. Mentally she was demented and fatuous, and refusing to speak or unable to reply to questions put to her.

April 28th.—Showing rather more intelligence; is at times excited, when she knocks her knees on the floor, as if in a passion.

December 10th.—Is now much stronger physically; able to walk freely without assistance, but no greater improvement in her mental condition.

1867. October 8th.—Was transferred to the the Lunatic Wards of Liff and Beuvie Poorhouse, improved.

On 28th January, 1881, patient was readmitted into asylum. Shortly after her transference to the poorhouse, her friends objecting to her remaining there, she was taken home, and continued pretty manageable till about the end of the year 1879, when she became considerably worse, more violent and excitable. Latterly she became dangerous, and struck her sister on the head with a brass candlestick. On her readmission patient presented the same vacant, demented expression of countenance; was unable to comprehend the simplest questions, and sat muttering a few disconnected words; in fact, was in a state of advanced dementia. In this state she continued, with very little change in her mental condition and in very fair bodily health, till January 16th, 1890, when she had an attack of erysipelas of right foot. From this she completely recovered, and seemed back to her usual condition, and remained so till February 10th, 1890. While being dressed, at 8 a.m., she suddenly collapsed, turned black in the face, and respiration ceased. Dr. Cameron immediately saw her. At first she seemed quite dead from absence of respiration, the only indication of life being irregular pulsation of jugulars. Was comatose, pulseless. Arms and legs paralyzed; face livid and cyanosed. Pupils not abnormal. Paralysis of respiratory centre being diagnosed, artificial respiration was tried after administration of stimulant sp. ether with good effect, the patient beginning to breathe fairly well and the pulse returning at wrist. (1.) About 8.30 a.m. patient suddenly turned completely black in face again for about a minute and half, but cyanosis was quite relieved by artificial respiration. (2.) Dr. C. left at 9 a.m.; pulse fairly good and patient breathing freely. (3.) Shortly afterwards, however, the breathing again began to grow feebler. When Dr. C. again

saw her it was more shallow and pulse weaker, patient dying at 10 a.m.; respiration ceasing while the pulse continued.

Post-mortem examination was made next day at 2 p.m., when the following condition was revealed, recorded by Dr. James Cameron:—

General.—Body plump. Rigor mortis marked. Hypostasis slight. Pupils equal; medium size.

Head.—Scalp thick and easily separable. Calvarium of soft consistence and sawn through with great ease. Dura mater normal, the veins being slightly congested.

A general view of the vertex showed the arachnoid to be congested and the brain firm and plump. On removing the brain the basal sub-arachnoid space was found to contain effused blood, distributed pretty evenly over the interpeduncular space, end of sylvian fissure, and pons and medulla, and extending down the anterior surface of the spinal cord, the whole being covered by the intact arachnoid. On the right lateral half of the pons and medulla was a considerable clot, from which ramifications extended down the right half of the spinal cord and to the ends of the sylvian fissures. The clot was dark and quite recent.

The arteries at the base were all in an advanced state of atheroma, the right middle cerebral artery being especially so. A section of the centrum ovale showed the grey matter to be of a dirty slaty colour, but with nothing otherwise definite. The white matter was congested and the puncta cruenta large and numerous, from which welled very dark fluid blood. The arteries appeared unusually prominent from their general atheromatous condition. On opening into the lateral ventricles the body and posterior cornu of the right was found to be filled with a dark, venous recent clot, from which effused blood could be traced along the choroid plexus and fold of pia mater (*velum interpositum*), through the great transverse fissure, and so to the sides of the pons, etc., externally, thus accounting in part for effused blood in the basal sub-arachnoid space. The left lateral ventricle contained a smaller clot along with sero-sanguineous fluid, which could be traced as above. Careful examination failed to discover here any source of the hæmorrhage. Sections through the basal ganglia showed nothing except the perforating arterial branches from the middle cerebral artery unusually prominent, with wide perivascular spaces.

The *iter a tertio ad quartum ventriculum*, on being slit up, was found to be occupied by a dark, recent vermiculiform clot, which joined a large collection of the same in the fourth ventricle and in the dorsal surface of the pons, which latter on examination was found to be totally wrecked and excavated by a large clotted effusion of blood. This large “pontine” clot even perforated through the right lateral half of the pons at about its middle point, communicating with the clot before mentioned as occurring in the sub-arachnoid space; in fact, the pons was totally dis-

organized by the hæmorrhage and the fourth ventricle filled with it.

Sections through the cerebellum showed nothing except sub-arachnoid clot between the folia.

Thorax. Lungs.—Both showed old pleuritic adhesions, and were congested, but otherwise healthy. The *heart* was large and fattily loaded. On section the muscle of the left ventricle was firm and very much hypertrophied. The valves were all competent and healthy. The mitral valve showed somewhat gelatinous thickening, but was probably quite competent, and was not stenosed.

Abdomen.—The abdominal viscera were generally healthy. The liver was small, but quite healthy. The spleen small and congested, but healthy. The kidneys were both small, but healthy.

Weight of organs in ounces (avoird.) :—Encephalon, $40\frac{1}{4}$; heart, 12; right lung, 16; left lung, 14; liver, $32\frac{1}{2}$; spleen, $2\frac{1}{2}$; right kidney, 4; left kidney, $3\frac{1}{2}$.

This case is instructive as showing the great difficulties in exactly diagnosing the seat of sudden cerebral lesions, and but from the fact of the sudden arrest of respiration at the commencement of the attack while the heart continued to act, though feebly, the case might very readily have been put down as one of syncope, especially as the paralysis, being total, did not materially differ from the collapse and muscular relaxation met with in sudden failure of the heart's action, and hence was not *per se* destructive. As is usual in pontine lesions, the pupils were not unequal. As regards the primary lesion, the probability is that at 8 a.m. a hæmorrhage took place in the pons near the centre of respiration, and thus producing sudden arrest of this function, and that a fresh outburst occurred at 8.30 when the second collapse occurred; that it broke through into the fourth ventricle, filling it, and then passed up the *iter a tertio ad quartum ventriculum*, through the foramen of Munro, along the choroid plexus, into the lateral ventricles, the choroid (*velum interpositum*) conducting it farther through the great transverse fissure of Bichât to the sub-arachnoid space outside the brain. In consequence of the disorganized state of the pons from the extent of the hæmorrhage, the exact vessel ruptured could not be made out.

Here, as usual, the physical conditions necessary for cerebral hæmorrhages were very favourable, advanced atheroma of the cerebral vessels and hypertrophied left ventricle.

Case of Cerebral Tumour (Fibro-Cystic).

E. D. or R.; female; æt. 40; married; Protestant. Duration of illness a few days. First attack; cause not known. Is not epileptic, but is suicidal and dangerous. Admitted June 2nd, 1887.

Patient's husband stated that for a year before admission she had been given to wandering about in an aimless manner, and had not attended to her household duties, apparently because she could not settle her mind to her work. Her mother is reported to have been insane at or just after patient's birth, and a cousin was insane after the death of one of his children. Patient has had three children; youngest ten months old.

On admission she showed great mental weakness; had a great hatred of her husband, declaring he abused her, had brought her to a house of ill-fame, and talked in a generally excited and silly manner. She had recently left the house with her child, remained out till two o'clock in the morning, and declared she would drown herself. No great alteration in the case took place until about the month of October, when symptoms of general paralysis appeared, and by April 9th, 1888, these had gradually and steadily advanced. Patient was now frail, and mentally getting more and more fatuous. By February 27th, 1889, paralysis had to a considerable extent become arrested, and mentally patient had somewhat improved; and by December 2nd, 1889, the report in Case Book was: "No great change physically; mentally clearer." From about this date, however, patient's power of locomotion deteriorated, very often having to assist herself along by holding on to wall of room, and at times complained of giddiness; and when visited by her husband about a fortnight before death her gait was so affected that she had to be seen in ward instead of being brought to waiting-room. For the last three months patient had occasional attacks of this giddiness about once a week, when she would fall down on the floor and require to be assisted up, the attack lasting about ten minutes, without loss of consciousness and without any convulsive symptoms. Beyond this no further alteration took place till March 1st, 1890, when, at 3 a.m., she was found by night attendant breathing heavily, with slight foaming at the mouth and semi-comatose. Continued in this state till visit at 10 a.m., when she seemed coming out of coma; had P. Ric. March 2nd, at 11 a.m., was rather better, more conscious, and had taken good breakfast; but from the time of the fit her legs were completely paralyzed, and could not even sit up in bed. Her arms, however, were not affected. She remained in this condition till the evening of the 7th March, when she recovered power over her lower limbs, to a certain extent being able to stand, and even walk along with the aid of support. In the forenoon she was excited, abusive, and wishing to get out of bed, but at that time was unable to stand. She had thus recovered power in her limbs between 11 and 7 p.m. She was visited by the night attendant at 12 midnight, 2 a.m., and 4 a.m., on all of which occasions she was talkative, and even seemed more lively than usual; but on the next visit, at 6 a.m., she was found half turned over on left side, quite dead and stiff. Whole body discoloured and livid; tongue protruding between

teeth; jaws firmly closed. Considerable moisture on left side of face, all pointing to death from severe convulsive fit. From the condition of the body, death must have occurred very shortly after 4 a.m.

The following is the record of the post-mortem examination made at 9 a.m. on March 10th, carefully extended by Dr. James Cameron:—

General.—Body very obese and abdomen very prominent. Rigor mortis considerable in lower extremities; almost absent in upper limbs and neck. Tongue protruded slightly between teeth, and small quantity of froth extruded from mouth. Hypostasis slight over dorsal region and of pink colour; most marked over mammæ and face. Pupils medium size and equal.

Head.—Scalp very thick and readily separable from calvarium, which was very thin; of uniform density in section. In some places very much attenuated; as in the temporal regions, and very easily sawn through from the general softness of the bone. Calvarium not adherent to dura mater. The dura mater showed nothing but congestion and erratic pacchionian bodies over the antero-frontal region. The general view of the encephalon after removal of the dura mater showed the arachnoid dry, congested, and with a peculiar greasy appearance and touch. There was no sub-arachnoid fluid at the vertex. The pacchionian bodies were fatty rather than fibrous. The brain was found to be slightly adherent over the ethmoid plate and in the anterior part of the middle cranial fossæ. On cutting through the attachment of the tentorium to the ridge of the temporal bone on the right side a globular tumour was found situated between the right half of the tentorium above, the wall of the petrous bone on the outside, and the right lobe of the cerebellum beneath, which latter projected a little way in front of the under surface of the tumour. The cerebellum, from the pressure of the tumour, seemed atrophied to about two-thirds of its normal size. The tumour was spherical, of fibro-cystic character, and two inches in diameter, and encapsuled by a fibrous layer, which took its origin from the junction of the tentorium and edge of the petrous bone in the form of a small pedicle. The growth was, therefore, quite extrinsic as regards the brain substance.

The cerebrum on section was found to be greatly reduced in consistency in the posterior half, so that the left posterior cornu of that lateral ventricle was torn into on removal of the brain. The grey matter was pale, narrow, ill-defined, and the layers not differentiated. The white matter showed numerous puncta, which were of remarkable size, considering that the cerebral arteries were not atheromatous. The cerebral tissue of the occipital lobes was almost diffuent.

The lateral ventricles were greatly dilated, but showed no granulations, and probably had been distended with fluid which

had escaped. Section through the basal ganglia revealed nothing abnormal except general want of definition.

The fourth ventricle, pons, and medulla showed nothing abnormal. The arachnoid was readily separable, and the cerebral arteries, as a whole, quite healthy. The base of the skull showed curious digital depressions, probably from atrophy in the anterior and middle fossæ, and where the arachnoid had been adherent. The torculum, on being cut into, allowed the escape of about $\frac{1}{2}$ oz. of dark fluid blood, probably due to the tumour compressing the lateral sinus of the right side. About 6 oz. of sero-sanguineous fluid escaped during the removal of the brain, of which the major part was derived from the lateral ventricles by the rupture of brain substance already mentioned.

Thorax.—The pleural cavities were dry, and there were no adhesions. Both lungs were quite healthy, but much congested. The pericardial sac was dry. The heart was fattily loaded, empty and flabby. The valves were all healthy, but the valve apertures large from want of cardiomuscular tone. The inner half layer of the left ventricle was fattily degenerated, and the cardiac muscle, as a whole, soft and flabby.

Abdomen.—Viewed *in situ*, the abdominal contents were normal. Liver of moderate size, congested, and fatty. Kidneys congested, but healthy. Spleen large, firm, and congested. The uterus showed several small, fibrous tumours. The right ovary was cystic; the left was more healthy, and showed corpora lutea from recent ovulation six weeks ago. Bladder empty.

Weight of organs in ounces :—Encephalon, *in toto* with tumour, 59; cerebrum, 48; cerebellum, medulla, pons, and tumour, 11; tumour, $4\frac{1}{4}$; heart, 10; right lung, 24; left lung, 20; liver, 56; right kidney, 6; left kidney, $6\frac{1}{4}$; spleen, 8.

From a careful consideration of the whole case it would appear that the gradual progressive paralysis in this case was not due to the presence of the tumour, but to the softened condition of the brain; but the attack of giddiness and sudden loss of power following these attacks were in all probability due to its presence. The tumour had probably been existent for several years, for although the giddy turns only showed themselves while patient was in the asylum during the last three months of her life, reference is made to patient having had “fits” in one of the medical certificates on her admission; and her husband, on being questioned since her death, describes them as similar to those above described. No very definite information, however, could be elicited in regard to them.

PHOTOGRAPHS TO ILLUSTRATE DR. CONOLLY NORMAN'S PAPER.

- FIG. 1.—Shows the general structure of tumour, spindle shaped, nucleated cells, arranged in bands and nests. Small indistinct hyaline body in lower right hand corner— $\times 170$.
- „ 2.—Body intermediate between hyaline globe and cell nest: distinctly cellular in centre: laminated hyaline externally— $\times 300$.
- „ 3.—Small hyaline bodies with traces of nuclei: lamination not clearly distinguishable— $\times 170$.
- „ 4.—Two large hyaline bodies, each showing two centres for concentric arrangement of laminæ— $\times 170$.

These excellent reproductions have been executed by the WOODBURY COMPANY, from negatives which my kind friend, Dr. J. ALFRED SCOTT, Professor of Physiology, R.C.S.I., was so good as to make for me. The sections from which Nos. 1 and 3, were taken, I stained in Bismarck Brown; 2 and 4, in Logwood.

C. N.

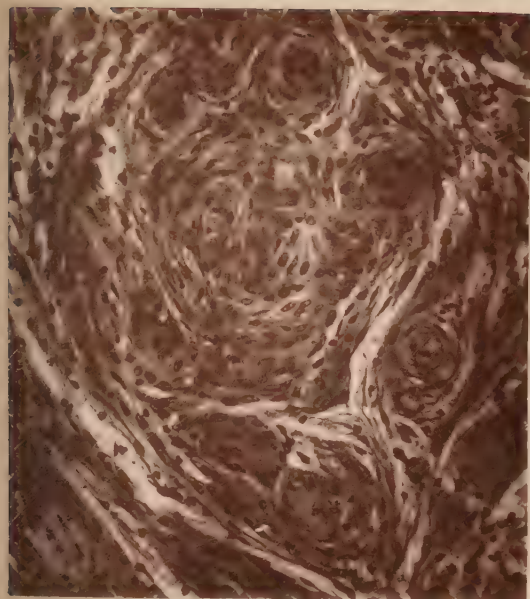


Fig. 1.

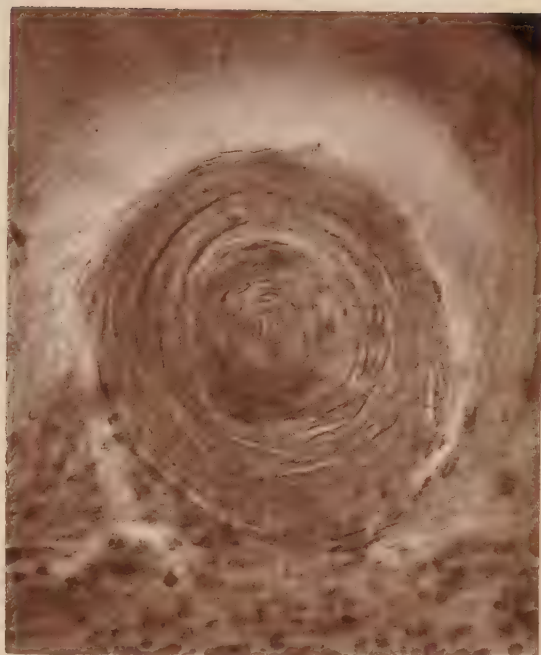


Fig. 2.

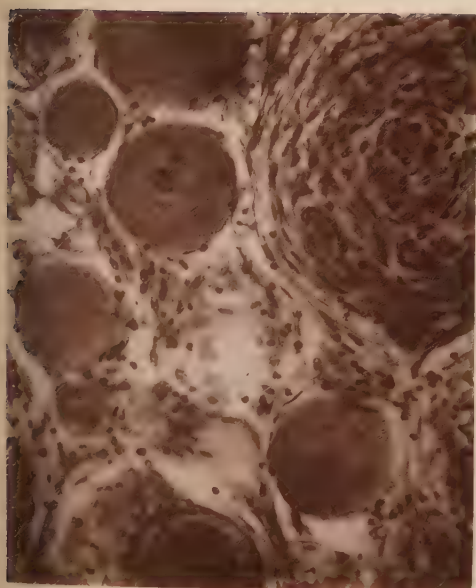


Fig. 3.



Fig. 4.



Case of Intracranial Tumour. By CONOLLY NORMAN,
F.R.C.S.I., Medical Superintendent, Richmond (Dublin
District) Asylum.

The interest belonging to this case is almost entirely a matter of morbid anatomy, as clinical history may be said to be wanting.

A. B., male, aged 27, was admitted to the Richmond Asylum May 6, 1886. He was described as being "an epileptic." He suffered from "fits," seemingly of an epileptoid character. This and the fact that he was blind are the only medical or official records made of his case up to September, 1886. In the latter month I took charge of the asylum, and my assistant on the male side (Dr. Cope), who, like myself, had only just come on duty, drew my attention to this patient, who suffered from an acute bowel trouble. This turned out to be dysentery, an affection long endemic in the institution; and of dysentery A. B. died, after an illness of about seven days. The circumstances were not favourable for a full investigation of the symptoms pointing to intracranial mischief. The rational diagnosis of atrophy of the optic discs was confirmed by examination of the fundus, but as far as could be ascertained the special sense organs were otherwise unaffected. There was certainly no motor paralysis. The mental faculties were clouded. Patient was sometimes rather noisy and incoherent, at others sulky and reticent. Once when he was comparatively lucid, he said that his illness began through being exposed to the heat of the sun when he was ploughing in the past spring. He got a sudden pain in his head, became stupid, had to stop his work, and was never quite well afterwards. The heat of a Leinster sun in February or March is not likely to have been injurious, but the incident dates, perhaps correctly, the earliest appearance of overt symptoms.

The man belonged to the peasant class, and came from a remote country place. He was a tall man, unusually well-built and well-developed, with firm muscles and a pretty thick layer of superficial fat. A careful examination of the body was made 24 hours after death. Elsewhere I have described the condition of the thoracic and abdominal viscera ("On Dysentery": Trans. Roy. Acad. Med. in Ireland, 1887, Case I. By some oversight this patient's age is there incorrectly given). It will suffice briefly to say that the usual lesions of acute dysentery were found together with right pneumonia. No traces of new growth existed anywhere save as beneath described. The body presented no signs of syphilis.

The calvarium and subjacent dura mater were normal. When they were opened the brain looked prominent, having an appear-

ance of being too large for the skull, such as has been described both in early cases of idiopathic epilepsy and in cases of tumour. The brain actually was large, and the convolutions plump and well formed, particularly in the motor area. There was no excess of fluid beneath the pia mater, nor in the ventricles. Over the lesser wing of the sphenoid on the right side the dura mater was pretty firmly adherent to the bone and to a tumour imbedded in the apex of the right temporo-sphenoidal lobe. The tumour in the fresh state was about the size of a golf ball, and roughly globular in shape, somewhat flattened on its under surface. When viewed from below *in situ*, the posterior outline was less curved than the anterior, giving this aspect a slightly pyramidal look. Its under surface presented a groove, deeper internally, running outwards and forwards in a recurved direction. About two-thirds of the tumour lay posterior, and one-third anterior to this groove, which corresponded to the lesser wing of the sphenoid. The surface of the tumour was irregularly nodose, seemed intimately associated with the pia mater, and presented a multitude of medium-sized and small vessels, some of which appeared to dip down into its substance. Its exact position was this: it lay in the anterior extremities of the first, second, and third temporal convolutions, and also in the outer part of the anterior extremity of the lateral occipito-temporal gyrus. It was not in contact with the uncinate gyrus, but the latter was a little fuller and a little nearer to the middle line than on the left side, being apparently pushed rather upwards and inwards by the tumour, which invaded the outer portion of the adjoining convolution. Viewed from the lateral aspect, it extended as far back as a point corresponding to a line drawn vertically downwards from the lower end of the Rolandic fissure. Viewed on the basal aspect, it extended at its most posterior part as far back as a point corresponding to a line drawn directly outwards from the extremity of the hook of the uncus on a flat projection. In the frontal lobe it lay in a cup-shaped depression extending exactly as far forwards at its most anterior central portion as the middle limb of the cruciate sulcus. This sulcus was particularly well marked on the left side, forming an H, with a well-marked central limb. On the right the tumour had just touched but not passed the internal limb, thus leaving the medial orbital gyrus free. It just touched the pars orbicularis of the inferior frontal gyrus, and the entire anterior half of this convolution seemed to be pushed a little upwards, but there was no loss of surface, nor was it anywhere adherent to the tumour. The latter, in the fresh state, could be lifted out of its bed in the orbital lobe, which was then seen to be a hollow lined with soft, pulpy brain tissue, and evidently the mere result of pressure. The tumour appeared to be attached at one small point to the lower angle of the Island of Reil. On its lower and inner surface a small boss projected inwards and forwards just anterior to the

locus perforatus anticus, and lay close to but did not touch the external root of the olfactory tract.

In the fresh state the tumour seemed to be intimately associated with the convolutions forming the extremity of the temporo-sphenoidal lobe. The specimen was overhardened in Müller's fluid, and then the tumour tumbled out on manipulation, leaving on a few fibrous-looking shreds, which ran, as it appeared on a first glance, into the substance of the convolutions. On more careful examination of the structure of the parts which was rather confused, I could not satisfy myself that these shreds ran into the white substance, and I am rather disposed to think they connected the tumour with the membranes at the bottom of the Sylvian and parallel fissures. From the surface the tumour extended inwards to about the depth of these fissures in their respective positions. It may be questioned, however, whether the liability to fall out of position, which one has seen in other specimens of cerebral tumour, may not have been in part connected, in this case at least, with the preservative processes, and due to the brain substance and the tumour hardening at unequal rates, and so tending to part company.

The fresh tumour was firm to the touch, cut with a fleshy or almost fibrous section, nowhere gritty, and was of a dirty grey colour. Small vessels could be seen running through its substance in considerable numbers.

Microscopically the tumour presents many interesting and somewhat puzzling points. It consists, in the main, of small spindle cells arranged partly in closely felted bands and masses, but chiefly in tightly-packed bird's-nest circles or ovals, some of which have one centre, some two, some several. In these whorls or bird's-nests the cells, especially centrally, are much flattened, and the appearance produced is extremely like that of an ordinary epithelioma. The nuclei of the spindle cells are oval and finely granular. Here and there we come across a small body looking like a nest with a cavity in the centre, which suggests the notion of a vessel. Undoubted vessels are numerous and relatively large. The walls are often immensely thickened, and present the appearance of endarteritis obliterans, together with periarteritis, if the phrase is allowable. The nuclei appearing in the vessel walls seem identical with those seen in the flattened and compressed cells of the nests. Some of the vessels are closely surrounded by tightly-packed rings of distinct though somewhat flattened spindle cells.

Scantily in many parts, and in some grouped closely together, certain bodies occur whose nature is doubtful. Their most noticeable form is that of a relatively large circle or spheroid, more or less distinctly laminated in a concentric fashion, of a somewhat glistening gelatinous appearance, and tending in all ordinary dyes to assume a clearer and lighter colour than the rest of the section,

and scarcely staining at all with logwood. Some of these bodies show within an outer laminated ring a broad circle of perfectly colourless hyaline-looking material. The centres of some continue to show lamination; others, especially those in which the laminated structure is interrupted by a hyaline band, seem to contain in the centre bodies much resembling the granular nuclei of the spindle cells, but in this case the centres do not stain well, and the structure is very indistinct.

That these circular objects are globes appears evident from the fact that, like the bird's-nests, they are always spheroidal in outline (circles or ovals). After very careful and prolonged searching, I have been unable to find any of them connected with vessels in the manner described by Cornil and Ranvier as occurring with the phleboliths of angiolithic sarcoma, nor can I make out that they are specially associated with vessels in any way.

On the contrary, though they do not stain with the beautiful distinctness of the bird's-nests, we can, not unfrequently, make out traces of structure besides mere lamination, and many bodies can be found that seem to present a transition between the well-marked nest of pseudo-epithelial cells and the glistening bodies above described. In the intermediate conditions traces of flattened cells are seen, and sometimes in these one can detect nuclei with tolerable distinctness. Some, both of the transition forms and of the bodies in which cell or nuclear structure is not to be detected, show distinctly two or more centres of lamination within one general "capsule" of tightly-packed spindle cells. In this particular they resemble the bird's-nests. It is difficult to see how this arrangement could be brought about if these bodies had been originally mere "buddings or ampullar dilatations" of the walls of blood-vessels. If I am right in my interpretation of what my sections seem to show, these bodies are cell-nests that have undergone some process of change or degeneration or infiltration.

That they are not nests that have undergone calcification, as is supposed to have occurred in similar case reported by Gowers (see his illustrations of the paper hereinafter referred to), and as actually occurred in similar case of Lanceraux (see "Atlas of Pathological Anatomy," Greenefield's Trans., Plate xlv.), is proved by the fact that they did not effervesce nor undergo any other change on the application of fuming nitric acid or hydrochloric acid. They underwent no change under the action of strong sulphuric or acetic acid. Alkaline solutions were equally powerless, even when sections were boiled in them. From these circumstances, as well as from the reaction to stains, I apprehend these bodies consist of the substance which recent German authors have described as "hyalin" (see Klebs' "Allgemeine Pathologie," 2 ter. Band., Kap. 4). Holschewnikoff has pointed out the physical and chemical characteristics of the hyaline variety of albuminous degeneration, as noted by him in a case affecting the cerebral

vessels, in the 112th Vol. of Virchow's "Archiv." These characteristics seem identical with those to be found in the bodies we have been considering. We may conclude then, I think, that they are concentric bodies which have undergone hyaline degeneration.

This tumour, I cannot have a doubt, belongs to that somewhat rare class which has been called "endothelioma." It presents nowhere any appearance that would justify one in calling it an alveolar sarcoma. Though in some places connective tissue is abundant, there is nowhere any arrangement of alveoli, and in many places connective tissue is rather scanty. It answers generally with tolerable exactitude to Ziegler's description of endothelioma of the dura mater, "characterized by the formation of cell nests and reticulated strings of cells," but not, as that author says, "within a fibrous stroma." "The endothelium of the lymphatic vessels," he goes on to say, "furnishes the characteristic clusters and strings of cells, and the latter are often excavated in a way that immediately suggests the parent vessel." (See Part ii., p. 325 of Macalister's "Trans.>"). Elsewhere (Part i., p. 220) Ziegler describes plexiform angiosarcoma and endothelioma as being the same, with cholesteatoma as a variety, and he points out that "the vessels of the lymphatic glands, serous membranes, and testis possess a perithelium; that is, an investiture of the adventitia, with endothelial cells." This perhaps accounts for the fact that endotheliomata are mostly found in the brain, dura, or lymphatic glands (cases described by Klebs). My tumour is certainly not a cholesteatoma, and I can see no justification for calling it an angiosarcoma. It is true that in some features it resembles the "angio-lithic sarcoma" of Cornil and Ranvier (nesting of the cells, etc.); but in others it differs from that form, for example in the smallness of its component cells; while neither the number nor the position of the vessels permits one to think that the growth, whatever its developmental history may have been, now consists of a plexus of vessels surrounded by proliferated endothelial cells.

If I might venture to hazard an opinion on a matter that seems to be highly obscure, I would say that we might have in the endothelial lining of the lymph spaces a point of origin at least equally probable with that of the vascular perithelium.

With regard to the further development of the tumour, and its peculiar tendency towards forming whorls or bird-nests, I have only conjecture to offer. In April, 1876, Dr. Gowers contributed to the "Medico-Chirurgical Transactions," Vol. lix., a paper "On the development of Spindle Cells in Nested Sarcomas." There can be no doubt that the "nested sarcomas," described with his usual accuracy and lucidity by this author, were identical with the growth which I have been endeavouring to describe above. Dr. Gowers refers to the partial arrangement of the cells in tracts and

bands, and to the nests resembling epithelium nests. The nests "were globular or slightly oval in shape. . . . In some the concentric arrangement obtained almost up to the centre of the globe; in others the centre was occupied by nuclei imbedded in granular protoplasm, and resembling the 'mother cells' of myeloid. . . . In some instances two series of concentric cells were enclosed in a single common capsule." The tumours examined by Gowers (three in number) are described as springing from the internal surface of the dura mater, and they presented macroscopic features closely resembling those noted above. Dr. Gowers believed that the spindle cells in these tumours had originated from small spherical cells by a process of "vacuolation." A spherical cell developed a vacuole. The cell protoplasm and nucleus lay round this vacuole in a shape strikingly like a signet ring. The thinnest part of the ring, on the side opposite to the nucleus, gave way, and thereby the sphere was resolved into a somewhat curved spindle cell. If this process went on after the original nucleus had divided, the second nucleus and protoplasm round it sometimes escaped from the vacuole and the embrace of the circumferential cell, but more frequently remained within the cavity, applied to the inner surface of the circumferential cell, within which it developed into a similar spindle cell. The nucleus was sometimes placed opposite to that of the original cell, more generally at some other part, so that the two cells overlapping formed a circle. It is easy to see how this process going on would result in "the formation of a number of cells arranged concentrically one within the other, around a central mass of granular protoplasm, containing one or more, commonly many, nuclei." For a more detailed description of the process I must refer those interested to Dr. Gowers' original paper, which is a masterpiece of terse description and close reasoning, and badly bears to be epitomized. The various stages of cell change, on which Dr. Gowers based his theory, were observed in perfectly fresh specimens, and are depicted in the admirable illustrations which accompany his paper. He notes that even a few days' immersion in solution of bichromate of potash rendered the distinctive features of the vacuolation process irre recognizable.

I cannot find out that Gowers' observations have been repeated, or that his views have been either confuted or upheld. In fact, his work on this subject seems to have been almost forgotten, and thus opportunities have been let slip which might have been utilized to aid in a decision. I must plead guilty to having, in common with certainly most others, fallen into this error. My specimens were only examined after a very prolonged immersion in Müller's fluid. I am, therefore, hardly in a position to argue with Dr. Gowers, an ounce of fact being worth a ton of theory, but certain difficulties strike me in the acceptance of his views. In the first place, if the spindle cells in these tumours arise thus,

why not all spindle cells? But we know that the spindle cells in an ordinary sarcoma have certainly not this origin. Again, the bird's-nest bodies are rather puzzling from their position than *per se*. They closely resemble the concentric globes of epithelioma. The appearance of containing a central mass of protoplasm, with one or more nuclei, does not apply very closely to the ordinary nests in my specimens, though it recalls appearances seen in some of the hyaline bodies. But even this appearance, or something very closely resembling it, is to be seen in epithelial nests. The cells towards the centre commonly retain their rounded shape, and their nuclei are very distinct. At p. 237 of the first part of Ziegler ("Eng. Trans.") a somewhat diagrammatic print is given, showing this condition in a bird's-nest body from an epithelioma. Besides, though one can readily understand how vacuolation can turn a disc into a spindle-shaped body, it is not so easy to comprehend how a sphere (round cell) can be so transformed. Vacuolated spherical bodies presenting, on section through one plane, the appearance of a signet ring, would, when cut in another plane, present the appearance of a very acute angled triangle, which is neither described nor figured by Gowers.

Finally, the necessity for such a theory as Gowers' only arises on the supposition that these growths are sarcomata. As the reader will have gathered, many authorities hardly distinguish between the two conditions of sarcoma and endothelioma. If we consider the tumour we have been examining to be an epithelioma, we shall need no special explanation of the occurrence of nests. Whether we accept the old view that the central nervous system develops from the epiblast, or the recent doctrines of Gaskell and Bland Sutton, which point to the hypoblast as more probably giving it origin, it does not appear that there is any inherent impossibility in the supposition that such a tumour as this is an epithelioma.

If this be so, the term "endothelioma" will merely have a descriptive value in such a case. Recent research has much curtailed the domain of endothelium as a distinct tissue, and, even granting its existence, it must be remembered that the stages by which a tumour like this is built up therefrom are merely hypothetical.

Suggestion during Hypnosis in the Insane. A case, with remarks, by EDWIN GOODALL, M.D.Lond., B.S., M.R.C.P., Wadsley Asylum.

John T., æt. 32. Admitted September, 1889. From the history it appears that he was imprisoned for embezzlement two years ago, and subsequently was a patient in Wakefield Asylum. Discharged cured. Has an uncle epileptic, and a sister is at present in this

asylum, the subject of melancholia. His state on admission was one of melancholia; he was regarded as suicidal. He was set at work in the grounds, and by the end of October following was more cheerful. At the beginning of November, however, when hypnotism was first employed, he was still depressed, taciturn, and suspicious—particularly of certain attendants. He believed that God was offended with him, that he had done wrong; he became tearful when religious topics were broached. There was very little self-confidence; his manner was humble and his expression “nervous;” habits, solitary and brooding. Hypnosis was produced by inducing him to gaze at a laryngoscopic mirror (reflecting light strongly), held in such a position that the eyes converged upwards and inwards. In all he was hypnotized six times; on four occasions in this manner and twice by means of the ticking of a watch held at his ear. That he was genuinely hypnotized (and this no one seeing him could doubt) the following observations, made on different occasions, tend to show:—He spoke of increasing drowsiness (the voice fading to a whisper); his head sunk, his eyelids closed. The rate of breathing quickened; the whole body became limp. There was complete inability to raise the eyelids when loss of power was suggested. The arms could be rendered completely insensitive by suggestion, and a pin thrust deeply into any part. Similarly hyperæsthesia could be produced. Futile attempts to raise the arms when powerlessness were suggested; also inability to move them out of a given position. He could not retract the protruded tongue; ate a raw potato (suggested apple). Whilst drinking water was told it was ink, when he entirely refused to continue. Drank a nauseous mixture of soap, salt, and water (suggested sherry), but suggestion had to be strongly made. Nursed a couple of shirts when told to “nurse the baby,” but would not kiss the child. [This merely proves that he was not a thorough automaton; as is well known, in somnambulistic and allied states subjects may refuse to carry out orders.] He made a wry face on smelling eau de Cologne when told, with accompanying suggestive sounds, that the odour was a foul one. The original wry face produced by the odour of assafoetida gradually relaxed as its pleasantness was insisted upon. He gave his name at request, in an unnatural voice, and slowly. On telling him that he had forgotten his name a remarkable state supervened. His distress was great; he essayed in vain to pronounce the name, and finally sank back sighing. He followed me round the room, taking huge steps over suggested obstacles. He awoke suddenly at a suggested word, but was sometimes aroused by blowing on the conjunctiva. On coming round was confused, emotional, giddy, and disinclined to move. I may add that I could not obtain Charcot’s “stages” in the case, though the means prescribed were adopted. The reflexes were normal during hypnosis. No more suggestions of the above-mentioned kind were made than were regarded as necessary to establish the genuineness of the state induced, and to prove the amenability to suggestion.

In the hypnotic state suggestions with a view to improvement of the mental condition were repeatedly made. It was thus sought to remove the ideas of unworthiness, of despair; to dispel suspicion; to implant fresh courage; to renew hope. As the knowledge that his sister was an inmate of the asylum, aggravated by the belief that he was the cause of her trouble, depressed him, she (at the suggestion of my colleague, Dr. Barton) was brought into the room in which her brother sat hypnotized, and induced to insist on her great improvement and the falseness of the belief mentioned.

This patient got well, it is true; but his case cannot be claimed as one in which hypnotism indisputably brought about the cure. He worked with zest, grew stouter, and looked, and expressed himself as feeling, altogether happier. Improvement, however, was gradual; no striking or rapid change was observed, such as would refer one, for its explanation, to the influence of some powerful agent. The means adopted may possibly—in one so amenable to suggestion—have participated in the results obtained, but those results cannot, in appreciable degree, be ascribed to suggestive therapy. In this connection it may be mentioned that the patient, after the third sitting, volunteered the statement (to an attendant) that God was on his side, and he felt he must get better in consequence. In a case such as the above there is much risk of appraising unjustly the method employed to promote recovery. We had to deal with simple depression; with a state of mind generally perverse, yet presenting no special delusion, such as one might hope to charm away by suggestion. The morbid state was ill-defined; the suggestions, of necessity, general in nature; the result consequently indecisive. I am not at all disposed, however, to regard this case as a highly-exceptional one; on the contrary, it is probable that it can be matched by many cases at present in asylums in regard to the facility with which hypnosis was produced, and the amenability to suggestion. Amongst these, doubtless, are some in an early phase of disorder, in which a prominently-insane idea can be focussed. Here—in contra-distinction to the previous summary—the morbid state is (relatively) defined; the suggestions will be special in nature; the result decisive. Brief reference must be made to a disagreeable state produced in the case narrated. An attraction towards the hypnotizer showed itself; when he appeared the patient felt impelled to come towards him. Several times he (patient) told the attendants that he felt he must go to the room in which hypnosis had been produced; on one occasion was

actually on the point of leaving his work in the fields to do so. Attempts to minimize the importance of the hypnotizer's personality by suitable suggestions during hypnosis failed.

In conclusion, I should like to draw attention to a paper by Dr. Herrero in the "*Revue de l'Hypnotisme*" for January 1890, in which he relates cases successfully hypnotized with the aid of chloroform. It is affirmed that the chloroform "sleep" has periods equally suggestible (to coin a word) with those of induced somnambulism itself, which periods occur at an early stage of the administration; and further, that by appropriate suggestions made at such times the true hypnotic sleep can be produced. The author, in his enthusiasm, thinks that by preliminary chloroformization, and suggestion in the suggestible period, everybody (*tout le monde*) can be hypnotized. My colleague, Dr. Ruxton, and I twice gave chloroform experimentally to a hypochondriac whom we had tried in vain to hypnotize on three occasions. Hypnosis was not produced, but we observed one or two points of interest. Thus, after the word "sleep" had been repeated at regular intervals for rather more than a quarter of an hour, accompanied by stroking of the eyebrows and light pressure on the lids, a curious plasticity was noticed when the arms were raised, and these retained positions when suggestion of fixation was made. From this it is clear that narcosis was not responsible for the state—whatever its true nature—in which the patient permitted pins to be stuck upright in his arm (after suggestion of anæsthesia). Most suggestions, however, failed, including those made with a view to mental improvement. But the method certainly appears to be worthy of trial in the insane. I think it justifiable, even as an empirical procedure; but certain theoretical considerations may also be presented in its favour. If we assume, as the basis of the induced state, an arrest of the association-activity of the brain, it is clear that any agent producing such arrest (and thereby leading to the unqualified acceptance of a suggestion) will facilitate the production of hypnosis. Chloroform—even short of narcosis, which, of course, is not desired—must be such an agent. Certain amongst the insane retain the activity in question; they are capable of instituting a comparison between present assertions and matters of experience, and so of discrediting a given suggestion. Apart from these are the cases in which, by reason of an active association of ideas, the attention cannot be gained. In either case the power of

suggestion is likely to be enhanced by a small dose of the narcotic; in the first, by the check administered to intelligent comparison; in the second, by the restraint put upon automatic activity.

Rough Notes of Pathological Specimens, exhibited at the Quarterly Meeting, held at Bethlem Hospital, May 15, 1890.
By R. PERCY SMITH, M.D., F.R.C.P., Resident Physician.

1. *Portion of stomach showing a large cancerous mass depending from the lesser curvature and causing partial obstruction to the œsophageal opening.*

From a male patient, J. W., æt. 54, who was admitted to Bethlem, November 28th, 1889. His daughter had previously been in Bethlem with puerperal insanity. He was said to have been subject to rheumatism and had had renal disease and dropsy at 21. For nine months before admission he had been on a farinaceous diet in consequence of severe dyspepsia. Three months before admission he became irritable and quarrelsome, neglected his business, and then subsequently refused to take food with his family. He then began to think he was poisoned, because, as he said, everything tasted and smelt of sulphur and phosphorus. He thought the lodgers in his house had conspired against him and contaminated his wife with these two drugs and also the air he breathed.

There were no hallucinations or illusions of sight or hearing.

On admission he described his sensations as above, but declared that the moment he got inside the doors the bad taste and smell vanished. He was extremely thin and weak, but believed himself very strong. There were no signs of abdominal tumour. For the first few days after admission he took fluid and farinaceous food well, gained weight and did not vomit except on one occasion.

On December 16th he had gained 6 lb. since admission; there was no vomiting, but it was noted that he spat up a large quantity of mucus and muco-pus. During the following week he had some return of hallucinations of smell, and also complained that another patient's breath annoyed him. As a matter of fact his own breath was offensive, as was also the sputum. A further examination of the lungs revealed the existence of cavities at the posterior aspect of the right apex and below the left clavicle. There was still no vomiting and no apparent difficulty in swallowing, but he would only take fluids.

On January 2nd, 1890, it was noticed that he spat up some milk with offensive muco-pus, and coarse crepitation was heard at the

bases of both lungs. This, taken together with his extreme emaciation, led me to think that he had malignant disease, probably somewhere about the root of the lung, and involving the œsophagus and left bronchus, and that a communication had formed between the two. There was still no vomiting, no hæmatemesis, no pain after swallowing and no sign of any tumour in the region of the stomach. He died the next day.

Post-mortem.—There was found very little change in the brain except pallor and some slight excess of subarachnoid fluid. There was found a large cancerous mass involving the lesser curvature and cardiac end of the stomach, surrounding the opening of the œsophagus and bulging up into it, but not completely obstructing it. The left lobe of the liver, the tail of the pancreas, the spleen, and splenic flexure of the colon were adherent to the stomach at the site of the growth. The lower lobe of the left lung was adherent to the diaphragm, and in its posterior border was a nodule of new growth. The stomach was closely adherent to the diaphragm opposite the spot where the left lung adhered to it, the diaphragm being reduced to the thinness of paper, but no actual perforation could be found. The disease of stomach could not be detected till the hand was passed up under the diaphragm. There was a further nodule of new growth in the left kidney, and old cavities in the upper lobes of both lungs.

Case is interesting from (a) difficulty in correctly diagnosing the gastric disease during life ; from the absence of the classical symptoms of gastric cancer, though malignant disease was suspected. No doubt the milk which came up with coughing had been retained in a pouch of the œsophagus above the obstruction and merely was ejected by coughing ; (b) the marked presence of hallucinations of taste and smell in association with the disease of the stomach and lungs.

According to Bevan Lewis, hallucinations of smell are generally associated with chronic alcoholism or epilepsy, and are of grave import. They are, however, frequently found in patients in Bethlem in quite curable cases, and according to Dr. Savage are frequently associated with sexual disorders or sexual delusions.

I may refer to a case published by myself some time ago in the "Journal of Mental Science," in which hallucinations of smell disappeared after the removal of an ovarian tumour.

It would be interesting to know if other members have met with hallucinations of taste and smell with digestive disturbance.

2. *Vessels from the base of the brain showing embolism of the left posterior cerebral and atheroma of the right middle cerebral arteries.*

Heart from same patient showing vegetations on the aortic and mitral valves.

Microscopic specimens showing hæmorrhagic foci ; diseased vessels ; increase of nuclei ; scavenger elements ; degeneration of cells ; great degeneration of the superficial layer of the cortex.

From a male patient, J. K., æt. 72, who was a chronic alcoholic, and who three years ago had paralysis of the right thumb, and one month before admission paralysis of the right arm, and the week before admission weakness of the right leg. On admission, on March 31st, 1890, he was aphasic and had right hemiplegia with rigidity and flexion of the right arm, increased knee jerks and ankle clonus on the right side, and also cardiac and renal disease. He was semi-comatose and gradually became more drowsy. On April 13th he was found to have loss of power in the left arm with rigidity as in the right. The left leg became weak, and both legs were abducted and rigid. He died comatose the next day. His condition was thought to be due to thrombosis or embolism of cerebral vessels.

Post-mortem.—There was extensive softening of the second and third frontal convolutions, the tip of the occipital lobe and both the ascending convolutions on the right side with recent hæmorrhage scattered through the softened mass, and the posterior part of the hemisphere was broken down into a cavity containing pulpy *débris* and blood. The right middle cerebral artery was almost blocked by a large atheromatous patch, but there was no actual thrombosis. The left posterior cerebral artery, about one inch from its origin, was blocked by an embolus, and there was softening of the whole of the under surface of the posterior part of the temporo-sphenoidal lobe, and also patches of softening and recent hæmorrhage in the posterior end of the second frontal, upper end of ascending convolutions, and upper parietal lobule. The whole of the occipital lobe was reduced to a pulpy mass. The softening on the left side appeared to be older than on the right, and no doubt accounted for the hemiplegia the patient was attacked with about one month before admission. On the inner surface of the caudate nucleus of the left side and just involving the edge of the internal capsule was an old smooth walled cavity of about the size of a horse bean, apparently of some age and probably connected with the loss of power in the right thumb three years before admission. There was fatty liver and cysts and infarcts in the kidneys. There were vegetations on both the aortic and mitral valves, and calcareous patches in the aortic valves.

The case appeared to be interesting from the presence in the brain of lesions of different ages and the generally

diseased state of the viscera, resulting from chronic alcoholism.

3. *Section of cerebral cortex (motor area) from case of acute melancholia, showing enlarged perivascular spaces.*

Increase of nuclei along the small vessels.

Granular and fatty degeneration of large pyramidal cells, some of which stain badly and have lost their processes, or are reduced to mere ghosts—some rather shapeless protoplasmic masses.

Numerous scattered nuclei throughout the cortex, and especially about the basis of or adhering to the large pyramidal cells, and perhaps representing the so-called scavenger elements.

Occasionally small vacuoles in the pyramidal cells.

From a female patient, R. J. W., æt. 48, whose mother and sister had died insane, and who herself had twice before been in Bethlem with stuporous melancholia, viz., in 1886 and 1888, from both of which attacks she seemed to have recovered perfectly.

She had been discharged recovered in June, 1888, and on December 27th, 1889, had been seen looking perfectly well. About ten days before her admission, on February 5th, 1890, she had become sleepless, depressed, and silent, had hallucinations of sight and hearing, refused food, and became suicidal.

On admission she was almost in a condition of stupor, refused food and resisted, and ten days after admission she died of pneumonia.

Post-mortem.—The following condition of brain was found:—The weight was 44 ounces, the dura mater was normal, the longitudinal sinus containing partially decolorized clot. On looking at the upper surface of the brain there was comparative pallor of the frontal lobes, especially the right, but the posterior half of the upper surface presented engorged veins, no doubt partly from position and partly from engorgement of the right heart. There were numerous patches of opacity of the arachnoid, and there was slight excess of subarachnoid fluid over the surface at the upper end of the ascending convolutions and over the superior parietal lobules. The falx cerebri was very shallow, so that the arachnoid was carried almost straight across from one hemisphere to another at the anterior end of the great longitudinal fissure. The pia mater peeled readily and the convolutions appeared to be healthy, except that the frontal ones were very pale and there were perhaps rather too wide spaces in the upper parietal regions; there was, however, no marked wasting. On section of the brain the white matter was everywhere mottled with purplish patches, and scattered through the grey matter were numerous whitish-yellow patches, especially in the frontal regions. Brain substance moderately soft. Purplish mottling affects ganglia of the base as well as the general brain substance.

Bevan Lewis calls attention to the frequency of patchy pallor, especially in the frontal regions, in cases of melancholia, and the same condition appears to have prevailed here. The venous congestion was no doubt due to the pulmonary complications. The presence of marked degenerative changes in the cells of the motor area of the cortex is interesting in a patient dying of acute melancholia, but probably the previous attacks account for some of the changes. At one of the Honours examinations of the Medico-Psychological Association, the question was recently asked as to what were the post-mortem appearances in acute melancholia. Personally I should have been very sorry to be obliged to answer the question, and I shall be glad to learn the opinion of members present as to their experience of microscopic changes in this condition.

Recovery from Insanity, after removal of a beard in a woman.

Reported by GEORGE FINDLAY, M.A., M.B., Assistant Medical Officer, James Murray's Royal Asylum, Perth.

How far a physical peculiarity or deformity may act as a cause of insanity, and how far the removal of that deformity may be considered as an aid towards recovery, is a question of some interest. The following is a report of a case of a young lady to whom an abnormal growth of hair on her face was a source of constant annoyance, and whose recovery from a state of melancholia followed on the removal of the deformity.

No. 2022, a young unmarried lady, was admitted to James Murray's Royal Asylum, in October, 1887, suffering from melancholia.

From the history, it appeared that there was no hereditary predisposition, and that this, her first attack, was of about two months' duration. Her friends supposed that the cause of her trouble was that she had fallen in love and that her affection had not been returned. The first symptoms of ill-health noticed were loss of appetite and depression, with sleeplessness; these had increased until about a week before admission, when she had become very excited and noisy.

She was 26 years of age, tall, well developed, and fairly well nourished, but had evidently been losing weight. Her hair was black, with a pale pasty complexion, and her expression was somewhat vacant. Beyond her appetite being very much impaired and her bowels constipated, there was nothing abnormal in her physical condition. Her menstruation was noted as being regular.

For a year or two previous to this she had been troubled with hairs growing on her face, but she had pulled them out with a forceps

which was found in her possession on admission. Her general disposition, when well, was said to be reserved, and her habits steady and industrious.

On admission she was very much excited, and gave utterance to numerous delusions, chiefly having a religious bearing — that her present condition had been predicted before she was born; that numerous books had been written about her; that in the service in church special remarks were made about her, etc.; and she also expressed herself as so wretched that she wished for death, and roundly abused her relatives for fancied illtreatment she had received from them.

In six weeks after admission she had very much improved both mentally and physically, but was very sensitive and emotional, and occasionally wrote peculiar letters to her friends, referring to her delusions, beginning and ending abruptly without date or signature.

During January she was still improving, and now said she had forgiven her friends, but it was noticed that there was a slight growth of hair on her face, principally at the sides, growing down in front of her ears. This seemed to cause her great annoyance, and she several times asked for her forceps to pull out the hairs with. In February she began to relapse, and by the middle of March had become very excited again and lost the flesh she had gained since her admission; her language was now much more incoherent than formerly, shouting out single words at the pitch of her voice. The growth of hair at the same time was becoming more marked. As she was becoming very emaciated, she was kept in bed and extra food and stimulants given, and an examination of her chest was again made, a proceeding she resisted very much, but no evidence of disease was discovered. Up to the middle of May no material improvement had taken place, the growth of hair still increasing and being rendered more apparent from its dark colour. About the end of June she became somewhat less excited and began to keep a shawl over her head, complaining of toothache. On examination, her teeth were found to be perfectly sound, and the complaint of toothache was evidently a pretext to be allowed to keep the shawl over her head to hide the hair on her face, about which she had again become very sensitive. Dr. Urquhart now decided that epilation of the hairs and the destruction of the bulbs by galvano-puncture should be tried. In order that this might be carried out, the hairs on the face were all cut short, and then the part to be operated on was moistened with a four per cent. solution of cocaine for about ten minutes until the skin was rendered insensible to pain. The needle of the galvano-cautery was then introduced into the prominent follicles, rendered more easily seen by the aid of a magnifying glass, and the current made to pass by pressing the button on the handle of the needle until the follicle was destroyed, the patient herself holding the negative reophore in her hand. In this way from twelve to twenty follicles were destroyed daily, the

patient never complaining of pain. For a day or two after the puncture the spots where the needle had been inserted were slightly inflamed, but this passed away without any bad result. The mental and physical condition of the patient gradually improved as the process went on, and soon all the principal hair follicles on her face had been destroyed. She was then sent to the country house at Pitlochrie for a change, where she improved so much that after having been tried at home for a month on pass, she was discharged recovered on the 18th October, 1888. Since that time she is reported to have remained well and there has been no return of the growth of hair.

It may be objected that there were various other elements in the recovery of this young lady, besides the removal of the hair; that perhaps time was one of the chief of these, but Dr. Savage, in reporting a somewhat similar case in the *Journal* of July, 1886, remarks that such cases are sufficiently interesting to suggest similar trials in the future.

OCCASIONAL NOTES OF THE QUARTER.

Fire at the Montreal Asylum.

Everyone who has read the description of the terrible fire at the St. Jean de Dieu Asylum, commonly called Longue Pointe, ten miles from Montreal, opened in 1875, cannot fail to have had his sympathies excited for the unfortunate inmates, and also, we hasten to add, admiration for the heroism displayed by some of the nuns to whose care the patients were entrusted. Those who are acquainted with the building, its height, and the number of men and women confined in the highest story, will have been able to picture to themselves the fearful scene which presented itself, the impossibility of escape, and the suffering which must have been endured. There were 1,300 lunatics in the asylum. How many perished is still unknown, and probably will never be accurately ascertained, as the books have been destroyed in the fire. The "*Toronto World*,"* of May 7th, when describing the calamity, observes "that ever since Quebec was a province its management of the insane has been a shame." But the present is not the occasion on which to dwell on the laches of this asylum. Let them

* We are indebted to this and other papers kindly sent us, for the information given in the remainder of this account.

perish in the fire which has consumed the building. The murmur of criticism should be silenced.

It is stated that the fire originated in a cupboard, having been kindled by a patient. This was in the second ward on the women's side in an upper story, and as the ventilation was carried on by a shaft connected with the towers, the flames soon appeared blazing up through the roof in the centre of each tower. As the heat increased, the statues fell from their niches to the ground, and then the inmates threw themselves on their knees and said that the saints had indeed deserted them. It is remarkable that not a male patient was lost. The victims were all women. From the upper wards, where the violent patients were secured, there came the wildest screams as they resisted the nuns beseeching them to make their escape. When the telegram announcing the fire and imploring assistance reached Montreal, the Mayor ordered the engines to the spot, but in five minutes the supply of water was exhausted--the St. Lawrence river was a mile distant. Then the firemen turned their attention to the inmates, and with their axes burst open the doors. It was such a sight as no fireman ever before witnessed. In one ward the patients, 25 in number, huddled together at the approach of the captain, like so many sheep, entwining their arms in one mass of humanity. He endeavoured to extricate them, but was obliged to leave them enfolded in a shroud of flame, and escape with his life. At some of the windows a maniac would be seen peering through the bars, grinning and jabbering at the bright flame that went up to the sky; as the heat became more intense, she would grasp them, and remain until the flames enveloped her. The scene must have been rendered still more horrible by the people, who came from all parts, attracted by the blaze, for in an hour there was one surging mass of vociferating Frenchmen, drinking whisky, and discussing the strange scene they beheld.

Although the character of this institution has, with too much reason, been severely criticized, it is an agreeable duty to be able to record the heroism of some of the nuns in charge, to which we have already referred. One of them, Sister Marie, was ill in the infirmary on the fifth floor, and to her rescue came three others, who seized their companion and bore her in a blanket to the staircase, but they were met by a sheet of flame, and all four perished. Others, by turns, implored, besought, and commanded the patients, and

succeeded in saving many. We are sorry to learn that the Lady Superior, Sister Therese, who had been seriously ill during the winter with pneumonia, and was slowly recovering, is suffering from shock and distress, which are not unlikely to prove fatal. Drs. Bourque and Baralet were carried from the building unconscious. The "Toronto World" observes "that whatever can be said of the management of the institution as a whole, the individuals exercised every power to lessen the calamity they neglected to avert."

This description of the fire at the Montreal Asylum would be incomplete without the following additional paragraphs. A loud explosion was followed by a crash of beams, the interior was giving way, and wild faces sank from the windows, and the shrieks were lost in the general uproar. One by one the walls toppled inward, and a fierce blaze burst up from the newly-added fuel, that rose to the dark skies and shot its glare over the St. Lawrence to the southern shore, and even tinged the crest of Mount Royal, ten miles distant. Then it died down to blackness, and nothing but a few brokendown towers remained in the midst of a seething mass of metal and *débris*, under which are now the ashes of the victims. By this time it was six o'clock, and growing dark, and very cold. The poor sisters, most of them young and delicate, stood ankle-deep in mud. The patients wandered about anxiously, clad in scant garments, many of them veritable Ophelias. When released many of them leaped for joy, and bounded like deer across the fields to the woods. A new dread has come upon the inhabitants from the presence of so many escaped lunatics, and they may count themselves fortunate if they are not visited by a series of alarms. This disaster has been foretold for many years. (There was an entire absence of fire-fighting facilities. Although the fire-appliances were there, they were utterly useless.) A long road was bethronged with carriages. The Mayor and Aldermen drove out in pairs, ladies, men in their dog-carts, and a few rode on horseback. It was a strange procession they met. The transport service of Montreal was pressed into the service, and vehicles of all kinds were returning, filled with vacant-eyed women, wearing blankets over their shoulders, and in front a pair of weeping nuns, clad in their black robes. Many were taken to the neighbouring convents of St. Isidore, St. Joseph de Bénoit, St. Laurent, and Point Aux Trembles.

We cannot allow this calamity to pass by without ex-

pressing, not only our sympathy with those who have suffered so severely, but the earnest hope that the Colonial Government will take this opportunity of altering the system by which the insane poor have been farmed out to a Religious Order. Whatever blame may be attached to the latter, it is impossible to avoid apportioning a certain amount of the evil which has been associated with this institution to the unwise course pursued by the Canadian Legislature.

Alleged Increase of Lunacy in Lincolnshire.

The question of a new asylum was brought forward at a quarterly meeting of the Visitors held May 15th, at Bracebridge, by Alderman Lieutenant-Colonel Conway Gordon. He proposed that in view of the steady increase of lunacy in the county and the crowded state of the asylum, negotiations be opened with the County Council, suggesting the desirability of building another asylum. He stated that in 1855 the total number of lunatics was 526; in 1860, 642; in 1865, 795; in 1870, 922; in 1875, 937; in 1880, 988; in 1885, 1,040; while on January 1, 1890, the pauper lunatics in Lincolnshire reached 1,123, which the speaker called an astounding figure. It would seem as if the correctness of this designation would be sensibly affected by the increase or otherwise of the population, and yet when Alderman Sharpe naturally asked, "Can you give us the proportion to population?" Colonel Gordon was unable to reply. Nor does it appear to have been thought important to ascertain whether this increase arose from a larger amount of occurring insanity at the present time, than in 1855. The answer to this question would also bear very decidedly upon the degree in which the numbers brought forward are "astounding." We admit, however, that the practical question is how to make provision for the increased number of lunatics from whatever cause such increase may arise; but there is nothing particularly alarming in having to provide additional accommodation as years roll on, if the population increase, and if the number of recoveries and deaths are fewer than the admissions. When the Bracebridge Asylum was built in 1855, there were 262 patients; in 1860, 391; in 1865, 481; in 1870, 595; in 1875, 606; in 1880, 658; in 1885, 704; and on January 1,

1890, 731; of whom 59 were sent to other asylums. The question arose, were they to erect, as the Lunacy Commissioners recommended, an auxiliary asylum in the district, or were they to erect one in another part of the county? When the asylum was built it cost £54,071, including land, and since then £11,150 had been expended in enlargements. Colonel Gordon was in favour of another asylum being built in the Holland division of the county, so that the people of that district might manage their own lunatics in the locality where their friends would be able to visit them. An amendment was proposed by Mr. Dickenson to the effect that the House Committee be appointed to consider and report what should be done to increase the accommodation for the patients belonging to the county. This amendment was carried. We hope that the present county asylum will not be increased in size, and that if another institution is necessary, after making full use of workhouses for chronic cases, and boarding-out harmless patients at a fair remuneration to the cottagers wherever this is practicable, it will be erected in a distant part of the county. We also hope that someone will be found to take sufficient interest in the question whether the liability to become insane in Lincolnshire has really increased, to work out the statistics of lunacy in a careful manner.

Mechanical Restraint.

The distinct legalization of mechanical restraint, which hitherto has belonged to the unwritten law, is of sufficient historical importance to call for the record of the fact in this Journal. By many this action on the part of our Legislature will be regarded as retrogressive, and would no doubt have caused great pain to Dr. Conolly had he been still living.

It will be remembered that by Sub-Section 6 of Section 40 of the Lunacy Act, 1890, it was enacted that "in the application of this section mechanical means shall be such instruments and appliances as the Commissioners may, by regulations to be made from time to time, determine." The Lord Chancellor, acting doubtless on professional advice, thus throws the onus upon the Lunacy Board in a manner as ingenious as it was unkind. We can understand the painful dilemma in which this official body found itself placed. The law, however, would not admit of a refusal. The trying nature of the duty thus thrown upon the Commissioners is

clearly evidenced in the regulation which they have issued as to instruments and appliances for the mechanical bodily restraint of lunatics. Thus: "It is with great reluctance, therefore, that the Commissioners approach the performance of a duty imposed on them by the Legislature, of determining the instruments and appliances of restraint, and their discharge of the duty must not be construed as implying any greater countenance by them of this mode of treatment than they have hitherto given to it." They confess, however, that they recognize no less than the Lord Chancellor that cases will occur in which it is necessary that mechanical restraint should be applied. They admit that this necessity may arise not only for the purpose of securing the safety of the patient, and of others, but also because "mechanical restraint is beneficial to the patient." They have, of course, held that "it should be restricted within the narrowest limits possible." Moreover, it should be applied by the most humane means, and should not be longer used than is necessary.

Then comes the definition of "mechanical means," and it is declared that they include all instruments and appliances whereby the movements of the body, or of any of the limbs of a lunatic are restrained or impeded. The practical outcome of what will in future be known as the Mechanical Restraint Act is that on the occasion of the visits of the Commissioners to an asylum, etc., instruments and mechanical appliances employed since the preceding official visit must be produced by the Superintendent, etc. No one doubts that "manutension" by attendants is a form of mechanical restraint. The hands are "instruments," and by their application, the movements of the body are impeded. It follows that they ought to be produced at the next visit of the Commissioners. Soft hands may be as important as soft gloves. The regulations contained in the circular of the Commissioners, dated April 16, 1890, require "that in every case where restraint is applied a medical certificate shall, as soon as it can be obtained, be signed by the medical officer describing the means used, and stating the grounds upon which the certificate is founded. A record of all cases of the use of restraint is to be kept, and the copy of the records and certificates sent to the Commissioners at the end of every quarter. Acting in contravention of Section 40 is a misdemeanour."

Solitude.

It is seldom profitable for the student of mental science to turn from the study of the living human book to the idealizations of the romancist; but occasionally creative genius places before us a type of character which, whether a delineation of an actual prototype or a mere conception of the fancy, it is well to closely examine. Such a character is the "Berger" of Jules de Glouvet.

Solitary confinement in dungeons, the silence of the monastic cell, the human waif languishing years on a sea-girt rock, and he who finds no fellowship but only faces—faces in the crowds of cities are all different examples of lonely individuals—and the effect of such environment has been described by various authors with varying degrees of skill, but Jules de Glouvet is, perhaps, the first who, with all the painful minuteness of the old Dutch school of painting, has traced the effect of solitude, from the cradle to old age, upon a peculiar but strong uneducated mind, and has shown with elaborate skill the forces moulding it. His gaunt, taciturn shepherd is placed in a somewhat similar position to man in his natural state. Like primitive man, he hears voices in the storm, articulate whispers in the leaves, and makes a mystery of natural phenomena. "In that intense life sun-born out of the hot earth, so many imperceptible beings multiplied, rustled, hummed; so many bodies unperceived crawled on bark or root; so many voices rose from hidden places. Between grains of sand secret passages were discovered, and within the cast-off garments—the skins of little centipedes. Such are what excited the infantile mind of little André. He, the solitary one, felt millions of living beings around him, beneath the earth, in the air, around the slender fibres of moss. The less he saw the more he believed in the myriad invisible, and when the north wind blew over the land he saw in the waving blades the steps of *those* who had just passed." His early years passing with his father, a shepherd learned in sheep craft, and with a strong belief in the virtues of plants, and living on the wild moor, the boy is strangely taciturn, but at the same time a keen observer.

His first great mental shock is the death of his father from hydrophobia; from that time he hates the very sight of a dog.

André Fleuse is now alone on earth.

The next event is his encounter with woman. Uncouth, silent, unsociable, yet Andrè seeks a shepherd's place at a neighbouring farm, and for the first time is brought into proximity with youthful women. He sees the "*vachere*," a girl 20 years old, active, smiling, red-cheeked, with her sleeves tucked up, her gown pinned back, the look free, the throat full. She tripped along daintily. Her chestnut hair escaped in disorder from beneath her head-dress. "And along the wall, broken by the corner of the cupboard, her rounded shadow moved. Locks of her hair were also shadowed on the wall like bind-weed tendrils." The farmer's wife, also still young, was there. "Andrè did not know if these women were beautiful, for he had no notion of beauty; but he experienced at their sight an intense and entirely new sensation—the mistress excited his curiosity, the servant his attention. He considered first the one, then the other, and found the last most pleasant to the eyes." He cannot forget this maiden; he dreams of her at night, or lies awake thinking of her, and comes to the conclusion that he is bewitched. "The shepherd remained several months in this sore discomfort. Isolation and silence had made him fearful and suspicious. Far from finding, like all young people, joy in relaxation, this young fellow of 25 was weighted with the burden of unconfessed chimeras; he walked with head low, ever ready to take offence. His own kind worried him, laughter annoyed him. It was henceforth a difficult task for him to collect two ideas, and extreme labour to emit the sound of a single sentence. In entering into the house he felt they spoke of him; nothing rendered him more morose than the spectacle of gaiety, raillery, and incomprehensible noisy fun."

One day a heavy sudden storm drives the *vachere* to take refuge in the stable. "She was then in his house, the *vachere* with the glossy skin. He shivered. At first a mysterious fear paralyzed him; he endeavoured to retrace his steps. But—it was *the charm*, no doubt—fear first stopped and then led him. Although his breath became quick, his walk was hurried, and without knowing how, he arrived behind the shed, having furtively made a detour in order not to be perceived. Renotte thought herself alone. She turned a trough upside down, sat upon it, and watched, for form sake, her flock browsing quietly in an old clover field, and knitting, sang as she knitted.

Fleuse, separated from her by the narrow front, looked

her in the face. He did not show his head. No, nothing but an eye to the right of a broken stone, and observed her at his will eagerly for the first time. His forehead was covered with sweat under the rain, his hands trembled a little. Instinct urged him on, and the influence of the surroundings made him sensitive to his instincts. Fear oppressed him less in this solitude, and his animal activities spoke louder in the shadow of his own wall, in his stable, in his own atmosphere." He put one of his arms behind him; something warm and unctuous passed slowly over his hand. He turned suddenly with upraised arm. It was Matinal, his dog, an animal he had always a horror of. He kicks the dog away.

"At the same time the contact of the warm tongue had lit a fire in his veins. Overcome by violent sensations, bestially impelled, he marched straight to the shed, right up to Renotte. The girl is astonished, but smiles.

"'Pardi,' she says, 'it is our shepherd. He is going to scold me for entering like this into his sheep pen.'"

He answers not. His throat was burning, his teeth set. The girl, who was a gossip, went on, observing nothing —

"'Have you been sent by mistress? I am waiting for the end of the shower—it pours so.'"

The man looked at her. His eyes fixed themselves on the rapid movement of her fingers while she knitted. His gaze wandered over her from top to toe. . . . He endeavoured to address a word, to stammer something to her, but could only utter a hoarse sigh. He suddenly stooped, like an animal, and seized her in his hairy arms.

Renotte, accustomed to the horse play of the rustics, struggled and cuffed him without much anger; but as he pressed her with greater violence she became cross, turned her head towards him, and met his gaze. Immediately she was seized with a sudden terror—this man, with set mouth, had the look of a madman. She desperately struck at him; he smiled a painful grimace with the open mouth of a hungry animal. She twisted herself, crying under the pressure; his inexorable arms ever enlaced her. She felt herself lost.

"'Malheureux!' said she, feigning consent, 'I hear my master calling me. Hark!'"

The shepherd's ears buzzed so that he also thought that he heard something.

"'Wait at least until I shut the door.'"

Curious and panting he loosens his hold.

Thanks to the ruse she escapes, and from this day the shepherd relapsed into his wild state. His father had caressed a dog, the dog had bit, and had given him his death; he had wished to caress a woman, the woman had bit, after her manner. Dogs and women were from henceforth equally odious. He had to support a dog because of his duties, but he carefully avoided woman. He soon returns to the isolation of his dilapidated and native home, and contracts a habit of speaking to himself. "Not that he holds with himself long discourse. No. But he endeavours to unravel one idea from another in the mists of his brain, and then in order to see it clearly seeks a word which can express its image. This word he pronounces aloud, in order to better comprehend it. Sometimes his words were overheard. His rare utterances, thrown into the midst of the immense silence, had no sense for other than him. The simple folk suspected him of communion with invisible beings. They thought he had the gift of prophecy; words followed by no connecting events were forgotten, but those which seemed to be followed by events were remembered. One day, recalling to mind Renotte and the burning sensation he had at her touch, he murmured, "The fire," and a moment afterwards he added, shivering, "The fire—at the supper hour." The overseer of the mill happened to overhear this, and six weeks afterwards a cart-load of hay getting on fire in the mill-yard while the millers supped was supposed to fulfil the prophecy. "The physical life that he led, his floating superstitions, the strange emotions of his past, his habitual state of fasting, predisposed him to unconscious exaltation. He reasoned not on the matter, but at length felt himself more drawn to the unknown, which attracted him, than to his kind, whom he loved not. He finished by discovering movements and forms in shadows which others passed without seeing. He had hallucinations, he saw visions. Credulous as the rest, he believed them when they talked of him; he listened in the space in which the supernatural speaks to simple souls and heard it. The people made him see by telling him that he had seen, and by telling him he had understood he thought he had done so. Led by his confused aspirations, he turned his back on his kind, went as far as he could into the entrails of nature, found himself alone, felt himself upon an eminence. His wildness increased—he thought he had *le don*."

Genius may go for forty days into the wilderness, and underneath the stars develop high thoughts; but enduring solitude, and especially the solitude of the young, tends to the production of morbid fancies, to self-exaltation, or to depression. The communion of the sexes, the music and the strife of tongues, the interchange of thought are necessities of our human natures. Solitary men are either gods, maniacs, or brutes, and it is given to very few indeed to be of the divine order. The weird figure that Jules de Glouvet has contributed to our study is not unknown in a more accentuated degree in asylums. The extreme taciturnity, coupled with evident powers of sensuous observation, the irritation produced when the laughter of others is heard, are symptoms sufficiently familiar. With the rest of the story we have nothing to do—the loves of Langevin and Louise, the murder of the Pere Robine, the dramatic detection by means of “le doigt qui parle,” and the fate of the evil and the good are, in our point of view, merely accessories to the conception of “le grand berger.”

“Le voilà debout, le grand berger. Il a serré le lacet de sa talonnette et montré du doigt les moutons au chien vigilant. Noiraud se frotte contre ses jambes, prêt à partir. Le soleil s’est couché tout pâle et le ciel est noir. Allons, Matinal, amène tes béliers. Déjà le grand berger s’achemine.”

Shall the Statistical Year of Asylums be Altered?

We fully endorse the following remarks of the President (Dr. H. Newington) at the last Quarterly Meeting of the Association:—“There seems to exist in the minds of some superintendents of asylums a fear lest, in consequence of various dates of the asylum year being altered under the Local Government Act, our statistics should have to be furnished, not from January 1 to December 31 as they now are, but to one of two other dates fixed under the Local Government Act. I need hardly say any alteration in our dates for the purposes of statistics would be disastrous. Some people make light of our figures and say they are useless, and no doubt they are useless to the great majority of people, because they use them as bricks, and try to build substantial edifices with them without the use of a due amount of the cement of common sense. But there are

some who can use those figures in a masterly manner, and with great advantage in solving or attempting to solve many of the great problems of insanity; and for these a change of date would be more than inconvenient. The danger arises in this way: The County Councils, under the Local Government Act, 1888, have to take office on the 1st November. They are elected triennially. Unless they choose to make any alteration in the date, they have to appoint, on the 7th November, the Visiting Committee of the asylums. This Committee has again, unless there is any alteration of date made by the Council itself, to make a report to the County Council of the management of, and sufficiency of, the accommodation in the present asylum, and they may make what other remarks they like. Thus we get one date—November 7—which is the first Quarterly Meeting of each County Council. Then, as the Local Government Act has conferred on County Councils large benefits depending on contributions that used formerly to be made to the Exchequer, and as the Exchequer year ends March 31, it has been ordained that all the accounts of County Councils shall be made up to the 31st March; and then under the Lunacy Act the accounts of a Visiting Committee of an asylum are the accounts for the purpose of audit, and so on of the County Council itself. Therefore it follows that the financial statement, with regard to a County Asylum, must be made on March 31; so we get the second date, and we hope to keep our own date—December 31—for making up the medical statistics. But we can see that there is considerable confusion of date, and I may say out of that very confusion arises the answer that we can give to those people who want to move the date of our statistics. It is evident from what I have said that the Government do not intend that the lay report or the report of management of an asylum, from the lay point of view, should coincide with the report of the management of the asylum from the financial point of view, and we may well say that there is no necessity that the report of the management of the asylum, from a medical point of view, should fall in with either of these dates, and we can therefore well claim that these reports be made, as at present, up to December 31. And in addition to this, there is this further argument that the Commissioners in Lunacy have announced their intention to request that all the figures of the various asylums, from their point of view, should be made up to December 31. I have

made these few remarks so that the question shall not be sprung upon any of you without due warning, and we trust that every superintendent will do his best to educate his masters, his County Council, to stick to the present arrangement.'

PART II.—REVIEWS.

Nouvelle Iconographie de la Salpêtrière (Clinique des Maladies du Système Nerveux). Publiée sous la direction du Prof. Charcot (*de l'Institut*) par PAUL RICHER (*chef du Laboratoire*), GILLES DE LA TOURETTE (*chef de Clinique*), ALBERT LONDE (*Directeur du Service Photographique*). Tome premier. Paris: Lecroisnier et Babé, Place de l'Ecole de Médecine. 1888.

It would be strange, in these days when illustration is all the rage, if France, who takes such a lead in modern art, did not possess a good illustrated medical journal. The one before us is quite in keeping with our neighbour's reputation for the production of artistic illustrations. It appears bi-monthly, and the first volume (for 1888) contains 50 phototype plates, perfect in execution, and 89 artistic woodcuts, chiefly from the pencil of that prince of medical draughtsmen, Paul Richer. The journal is devoted, as the name implies (*εἰκὼν*, an image; and *γραφω*, I write), to topics capable of illustration. The first part of each number contains cases occurring in the clinique, and the last few pages contain a description and reproduction of some ancient painting, fresco, or sculpture, which represents either a miracle or some other historical episode having more or less of medical interest.

The periodical is, as the title page announces, the organ of the Salpêtrière school, and it will be interesting to glance for a moment at the origin of this school of neurology.

The way they appoint physicians and surgeons to their hospitals in Paris is very different to the method adopted in London. There is no canvassing of lay-electors, no clan-like support of your "own school" in defiance of all-comers, good or bad; but every candidate for the rank of "Médecin des Hospitaux" has to submit himself to an examination, or "concours." Partly from the number of marks thus ob-

tained, partly depending on the candidate's previous career, and to some extent depending on the original work which he may have done, a list in order of merit is published. Those at the head of the list have the first choice of the existing vacancies. The appointments most coveted (unless the candidate has already adopted a speciality and prefers to attach himself to a special hospital) are at the hospitals most centrally situated, and especially the Hôtel Dieu. The last candidates on the list, if they get a hospital post at all, have to content themselves with the outlying districts until their seniors die or retire, when they can, if they choose, move on to a more coveted post at some other hospital. All of the hospitals are under the administration of the State.

The medical visitor to Paris 30 or 40 years ago might have made the acquaintance of a young unknown physician whose forte was not that of passing examinations, albeit possessed of a remarkably clear head and a large faculty for true scientific research, withal a pupil and devoted admirer of Duchennes (de Boulogne). This young man passed his "concours," but he had to content himself with an outlying hospital, and either at this time or soon afterwards became connected with the Hospice de la Salpêtrière, the female Workhouse Infirmary of Paris, an enormous pile of buildings covering several acres of ground, and containing several thousand inmates, for the most part old people, suffering from the so-called uninteresting and incurable ailments incidental to old age. However, our young physician made valiant use of this immense field which lay ready to his hand. He studied these old people as they had not been studied before, and by the force of his personality collected about him other earnest workers. By-and-bye the Government, recognizing his merit, enabled him, with the approval and co-operation of the University of Paris, to found a school of neurology. By slow degrees a pathological laboratory was built, an outpatient department provided, an electrical department, a photographic studio, and, lastly, two years ago, the journal now before us was presented to the medical world.

We have often been struck, when attending the clinique of the great French professor, how familiar he is with English literature—especially of bygone generations, such as Brodie and Graves—and with what respect he always alludes to their work. It is not, therefore, surprising that the first article, from the pen of the chef-de-clinique at that time, M. Gilles de la Tourette, should deal with a point to

which Todd* first drew attention, viz., the "Attitude and the Gait in Hysterical Hemiplegia." The article is admirably written, and illustrated with two excellent phototype plates showing patients in the act of walking, and several woodcuts figuring the footsteps, the changes in the sensation, and fields of vision of the patients, whose histories are given. Two interesting cases, aged 47 and 20 years respectively, of hysterical hemiplegia in the male, are given; and it is shown that the hysterical hemiplegic drags his foot in a flail-like fashion behind him, whereas in organic cases the foot is thrown round by a movement of circumduction at the hip. But this feature, as the author points out, is one which belongs to all flaccid hemiplegiæ. However, the flaccid period in the course of organic cases is so short that if one finds that the foot is still *dragged* after several months, the chances are greatly in favour of a hysterical origin.

The same number also contains articles on "The Morphological Anatomy of the Lumbar Region," and "A Typical Case of Paralysis Agitans," by Paul Richer; the treatment of "Fibro-Tendinous Distortions Consequent on Spasmodic Contractures," by Paul Blocq, all based on cases and beautifully illustrated. At the end is a reproduction of an old painting of a leper, by Albert Dürer, which shows well the deformity of hand dependent on atrophy of the interossei.

The next number (for March and April, 1888) opens with an account of five cases of Friedreich's disease, collected and narrated by M. Gilles de la Tourette and two of the internes, which illustrate well the features of this hybrid disease—advent during adolescence, hereditary taint, motor inco-ordination, Romberg's sign, absence of patellar reflex, slow course and gradual involvement of the upper extremities, scanning of speech, more or less marked nystagmus, without affection of sensation or urinary troubles.

Then M. Féré contributes the results of observations on the respiratory curve of 130 epileptics in the intervals of the fits, showing that expiration is prolonged in most of them, and that the whole curve is spasmodic and jerky (as compared with a normal tracing). The author points out that the characters of his tracings are interesting, "because they seem to indicate that epileptics, more often than is generally believed, present permanent convulsive

* "Clinical Lectures on Paralysis," etc., 2nd Edition, 1856, p. 20.

phenomena." The next paper gives an interesting case of injury to the external popliteal nerve by fracture of the head of the fibula, and describes the resulting perversions of sensation. The plates at the end give, side by side, representations of a grotesque mask from the Church of Santa Maria Formosa (Venice), and a real case of hysterical glosso-labial hemispasm, which are seen to be identical.

The volume before us, though dealing principally with nerve conditions, is not narrow in its "exclusiveism"; and we find a case of unilateral lentigo (freckles) which occurred in one of the epileptics attending the clinique, and also an interesting paper by M. Féré on "Modifications of the Pulse during Epileptic Paroxysms, and the Influence of Localized Muscular Effort on the Form of the Sphygmographic Tracing." It is interesting here to emphasize what is too often lost sight of, that the blood pressure in the vessels is regulated, not only by the elasticity and contractility of the arteries themselves (which together form one of the five factors that control the blood pressure), but also by the elasticity and contractility of the tissues around.

Many of the articles we have mentioned run through consecutive numbers, and so it is with an exhaustive account, by M. Pavlidès, of a case of tabetic arthropathy of the ankle-joint, followed by autopsy. Two beautifully coloured plates of the ankle-joint and five phototypes of the microscopic changes in the cord enrich this paper.

Among the newly-described disorders which have of late years been sorted out and described, Acromégalie has attracted a considerable amount of attention. The credit of the nosographical achievement is generally attributed to M. Pierre Marie, and, so far as we are aware, his paper in the *Revue de Médecine* for 1886 is the earliest description of the disease.

The last two numbers of the "Nouvelle Iconographie" contain a further contribution to the subject by this author in the shape of eleven cases of the affection which he has collected. The name, derived from *ἄκρον*, extremity, and *μέγας*, great, was chosen on account of the most prominent symptom, a gradual and almost uniform enlargement of the head and features, hands and feet, coming on in most cases about the middle period of life. In advanced cases there is enlargement of the spine, limb bones, and ribs, the former being attended with stooping, the last named leading to a very characteristic deformity of chest. Gradual in onset, slow, and

for the most part painless in its course, the disease, like myxœdema, often escapes the notice of the patient, and even of his friends; and it is only when he consults a doctor for headache or some inter-current affection that the condition is recognized. Headache and pains in the limbs would seem to be not infrequent symptoms; but, without these, the disease may exist for years without recognition. Iodides have been employed for its treatment in some cases, but with only temporary benefit.

Space forbids our dwelling on this interesting production at greater length on this occasion, but we hope to continue the review of the later issues in a future number. It is impossible to speak too highly of the beauty and accuracy of the illustrations. Neither pains nor expense have been spared, and the result is all that could be desired. Here are life-like reproductions capable of conveying, for all time and to all countries, perfect representations of diseased conditions. As for the text, it is quite in keeping with the excellence of the plates; and consisting, as it does, entirely of cases, facts, and observations, it forms a work of classic value. In all respects it is a production worthy of the first neurological clinique of our time.

The illustrations drawn from ancient pictures of miracles and the like—an idea which we may, perhaps, be forgiven for saying is essentially French—are exceedingly interesting and attractive. A careful study of them would go farther to make one a believer in the authenticity of the Bible than a great many of the arguments usually advanced, for they help to give a physical explanation of many supposed supernatural phenomena.

An Experimental Study in the Domain of Hypnotism. By Dr. R. VON KRAFFT-EBING. Translated by Charles G. Chad-dock, M.D. New York and London: G. P. Putnam's Sons. 1889.

(Concluded from p. 262.)

In the last number of the Journal we reviewed the above work by Professor Krafft-Ebing and his conclusions in regard to his experiments in hypnotism. We now continue and conclude them. Referring to the suggestion of changed personality frequently induced in hypnotized subjects, the

author states that the female patient upon whom he made experiments, when changed into a school girl, wrote in quite a different style from her ordinary hand. He sees no difficulty in supposing that the handwriting of a patient, when changed to a girl at school by suggestion, actually corresponds with that of her school days. He sees no improbability in the statement that "the memory of psychophysical phases of life, which have long become a part of the past, can again become active under favourable circumstances" (p. 122).

It is important, from a medico-legal point of view, that this patient, "as soon as she undertook to carry out a post-hypnotic action commanded when she was in the hypnotic sleep, so far as it involved a state, or a complicated action, passed into auto-hypnosis; that is, that the suggestion had a hypnotizing effect as soon as it became actual" (p. 123). The patient in this condition resembles a sleep-walker actuated by fixed ideas.

It is undoubted that without the circle of ideas, opened by suggestion, the mind is a blank, or its action is limited to simple perception.

One of the most important proofs of the genuineness of the states described by the author, and of the absence of simulation is found in the fact that three different states of consciousness, which are described as induced in this patient, were apparently regular when the conditions were identical. These states had absolutely nothing in common, except that they were observed in the same individual. They never intersect; each has its own memory. Thus a triple consciousness is exhibited, each founded on a nervous mechanism of a peculiar kind.

(1) That of an ordinary hysterio-epileptic with complete clearness of consciousness.

(2) That of one found in a state of complete inhibition, or sleep, but who can be partially awakened at will and be impelled to mechanical, automatic action of the greatest precision by suggestion.

(3) That of a somnambulist capable of spontaneous action within a limited mental sphere as a result of auto-suggestive or post-hypnotic ideas suggested by a third person, but depending on a dreamily deepened consciousness. That this is a very serious condition cannot be denied, seeing that the subject can be made the involuntary instrument of another individual's suggestion of crime.

There are other points of curious interest in the experiments made on the same subject by Dr. Jendrassik. Thus suggestion of the paralysis of a limb was followed by it for a whole day until it was removed by a renewed hypnosis and suggestion. It is noteworthy that the deep reflexes were increased. They are not increased in simple hypnotism. Hemi-anæsthesia was induced by suggestion. Deafness was induced completely or partially, so that only a certain voice or sound was heard. The same is true of blindness. Persons, or the entire company, could be removed from perception by suggestion. The induction of hypnotism could be frustrated by its being suggested to her that she should not allow herself to be hypnotized. A photograph can be suggested to her on a white sheet of paper, in consequence of which she recognizes that particular sheet among others similar in appearance. If the letter *d* is drawn with only the finger on paper it is visualized, and if the paper be turned upside down she sees *p*, and in a mirror *q*. A sheet of paper bound on one leg and suggested to be a mustard plaster produces redness, and even a small blister next morning. Objects pressed on the surface of the body and suggested to be red-hot caused, after some hours, a blister and wound in the form of the object employed. More remarkable is the statement that anything pressed on the left side and suggested as hot is followed by a symmetrical and reversed mark upon the right side. Attempts to cause increase of temperature failed although the patient became ill.

The Professor observes that the experiments which he made at Graz were never undertaken save in the presence of a number of physicians, *portis clausis*, and with witnesses bound to tell the patient nothing of what took place during hypnosis.

Similar results to those here detailed have been again and again reported by other experimenters, especially in Paris and Nancy; but when they are confirmed by German Professors who have been very sceptical in regard to any hypnotic phenomena beyond those of the most elementary description, it is worth while recording the fact.

Anatomie Artistique. Description des Formes Extérieures du Corps Humain au repos et dans les principaux mouvements.
Par le Dr. PAUL RICHER, chef de Laboratoire à la Faculté de Médecine, etc. Paris: E. Flon, Nourrit et Cie, Imprimeurs-Editeurs. 1890.

This is a work which cannot fail to excite the admiration of all who are able to appreciate talent and conscientious labour. The first fasciculus contains nearly 300 quarto pages of description of the most lucid and detailed kind, of immense value to artists, the express object being to give (1) to the anatomical figures a preponderating position, to supplant as much as possible the written description by the outline, in such a way that the work may consist primarily of plates, while the letter-press is merely an accompaniment; (2) to follow in the order of the figures, as in that of the text, the analytical method—that which proceeds from the simple to the complex, from the known to the unknown, from a part to the whole.

The plates occupy the second fasciculus, and are beautifully executed. No expense has been spared in their production. Of these there are 110, and they include more than 300 figures drawn by the author himself.

Those who have associated M. Richer only with the works on hysteria and hypnotism, will learn for the first time that the author is an excellent anatomist, and a skilful artist.

As is truly observed by the author, in order to make artistic anatomy what it really ought to be—anatomy applied to the plastic arts—it is necessary that the relation be established even to the smallest details between the external form and the structures beneath, and also between anatomical notions and the naked figure. For this reason it was judged necessary to prepare a work more profusely illustrated than any existing, which should accompany the anatomical works already in the hands of artists.

The human body is studied anatomically in the first instance, while its external forms (morphology) are treated of in the second place.

M. Richer says he is one of those who think that science has nothing to teach the artist in regard to the direction of a line, or the external aspect of a surface. He thinks that any artist worthy of the name is especially gifted with the power of seizing at once the form itself, and for seeing,

judging, and, lastly, interpreting it. With the form, as with colour, it is far from being one and the same with all artists. Each, according to his temperament, has his own special vision in regard to it. The true artist is bound to represent living nature as she is in her external form, and in relation to the deeper parts which stand in causal relation to it. His duty lies not so much in description as in demonstration and explanation. Two qualities suffice him—clearness and precision. For his assistance the author has divided the surface of the body into a certain number of fixed areas, and given in a special nomenclature the name of these different regions, and of the morphological details of which they are composed. Hitherto, human morphology has been less precise than that of a horse.

It is not, however, only for the artist that such a work is necessary. To the physician and the surgeon it is of great service to have the exact external form of the various regions of the body before him as an aid to diagnosis.

This magnificent work ought to be in the possession of medical men and artists, as well as in every public and medical library. Doubtless the Library of the College of Surgeons and that of the Medico-Chirurgical will vote it in.

Les Difformes et les Malades dans l'Art. Par MM. CHARCOT et RICHER. Paris: Lecrosnier et Babé. 1889.

The authors explain in the preface that the origin of this work was the visit of one of them to Venice, where he saw and was much struck with a grotesque mask in the church of Santa Maria Formosa, which presented all the characters of a well-defined deformity, of which he had shown several remarkable types shortly before at the Salpêtrière. The suggestion happily proved a fruitful one. When the old artists and sculptors produced these deformities, in some instances the motive was to caricature, although actually taken from a real model. In other cases we see the portraits of persons presenting natural deformities, for example, dwarfs and buffoons. Lastly, there are the remarkable representations of diseases miraculously cured, and of course the familiar representations of demoniacal possession. The authors anticipate a certain amount of criticism from those who cry out at the very idea of science being introduced into the

domain of art. It is truly replied that science and art are only two manifestations of the same phenomenon. The artistic representation of bodily deformities shows, as the authors point out, how artists have been known to unite the worship of the beautiful and the careful study of nature, and, moreover, introduces into the plastic arts a new element of criticism which rises to the highest scientific point, and demands, from medical men more especially, an explanation of its true meaning.

It is needless to say that the plates are beautifully executed and are of permanent interest and value. The medical profession, and especially psychologists, cannot fail to appreciate the light thrown on these pictures by the authors of this work. Whether in all instances the interpretation of the works of art depicted is certainly correct may perhaps be doubted. For instance, in the fragment of *Saint Antoine tourmenté par les démons*, by Matthias Grünewald, in the museum of Colmar, in Alsace, which is regarded as an illustration of syphilis, some imagination is required to make this diagnosis from the picture. However, this is an exceptional instance, and we repeat that the work is one of medical as well as artistic value.

The Psychology of Attention. By TH. RIBOT, Professor of Comparative and Experimental Psychology at the College de France. Authorized Translation. Published by The Open Court Publishing Co., Chicago; and Longmans, Green, and Co., London, 1890.

Attention is certainly one of the most important activities of the mind, since a mental fact only exists for us in so far as we attend to it. Yet in older works on mental science, Attention receives but scant consideration, a few paragraphs or pages only being devoted to it. And even in more modern books, if we except Mr. Sully's "Outlines of Psychology," which contains an excellent, but all too short chapter upon it, the subject is dismissed with much briefer reference than its importance merits. Recently, however, it has been the object of some very careful study and analysis at the hands of several foreign observers, especially among the Germans,*

* Apperception of the Germans may be taken as identical with Attention, though it is sometimes held equivalent to volitional or active attention only.

who have approached the subject from an experimental point of view.

The little book before us, which takes their work into account, is a most welcome contribution, and should certainly find a place in the library of all alienists, psychologists, and, more than all, those interested in the education of the young. For it is in the early period of life that the habit of attention can be cultivated and trained; it is upon the accurate observation and careful training of this quality, or rather attitude of the mind, that the after life of the individual so greatly depends. Errors and deficiencies in this respect are no doubt the reasons why so many of the round pegs of society find themselves in square holes.

Professor Ribot at the outset defines Attention (p. 12) as an "intellectual monoïdeism, accompanied by spontaneous or artificial adaptation of the individual;" monoïdeism being taken to mean the temporary predominance of an intellectual state or group of states. This definition is accurate and concise enough, but is it not a trifle abstruse (we had almost said far-fetched) in what purports to be a book for all readers? Psychologists, he believes, while giving much study to the effects of Attention, have given but little to its mechanism; and he devotes himself almost entirely to the investigation of the latter point.

He recognizes two well-defined forms, and the first chapter treats of Spontaneous, Natural, or Instinctive Attention. It is this form which alone exists naturally, though in widely-varying degrees, in nearly every living creature; at any rate everyone capable of experiencing pleasure or pain. The author maintains that wherever found it depends, without exception, on emotional states; and thus the kind of Spontaneous Attention evinced by a person reveals more than anything else his character and tastes. Then follow brief, but admirable descriptions of the physical concomitants of Attention, viz., vaso-motor phenomena, respiratory phenomena, and motor phenomena or the phenomena of expression; which are, the author says, neither effects nor causes, but elements of the condition. We miss any reference to the relation of curiosity to Attention, though Surprise, or Spontaneous Attention augmented, is well treated of. A description of this latter and of the origin and evolution of Attention closes the first part.

Turning next to Voluntary, Active, or Artificial Attention,

which in former times was the only kind generally recognized amongst authors, Professor Ribot is at great pains to establish the correctness of his views as to its motor origin; and, to this end, traces the motor elements in perceptions, emotions, images, and general ideas. Just as "every act of volition, whether impulsive or inhibitory, '*acts only upon muscles and through muscles,*'" so "in all cases of Attention," presumably Voluntary Attention, "there must necessarily be a play of muscular elements, real or nascent movements, upon which the power of inhibition acts" (p. 51).

This explanation of the mechanism of Attention is probably admitted at the present time by the majority of psychologists, but to those who still hold diverse views, we cannot do better than commend the able and lucid arguments and illustrations contained in this little book. The rôle played by muscular inhibition and the consequent sensation of effort in sustained attention, the source of which the author holds to be peripheral, are well put, and an admirable, though brief, sketch is given of recent experimental researches upon Voluntary Attention.

But undoubtedly the most interesting portion of the book is the third section, which deals with morbid states of Attention. The border-land conditions, distraction and absorption, for which many great scholars have been famed, do not strictly come within this category, and are only briefly referred to. Abnormal states are classified into (1) Hypertrophy of Attention; (2) Atrophy of Attention; and (3) Congenital Deficiency. The terms hypertrophy and atrophy are so intimately connected by custom with somatic changes that it would perhaps have been better to employ some other terms, such as Hyper-Attention, and Deficient Attention or Inattention.

The normal condition of mind, as Professor Ribot points out, is a plurality of states of consciousness, or—according to the expression of certain authors—polyideism. Attention is the momentary inhibition, to the exclusive benefit of a simple state, of this perpetual progression, it is monoïdeism. However, Attention is only *relative* monoïdeism, that is, it supposes the existence of a master idea, drawing to itself all that relates to it and nothing else, allowing associations to produce themselves only within very narrow limits, and on condition that they converge towards a common point. Fixed idea, the first of the pathological varieties coming under "Hypertrophy of Attention," is this attitude of

mind in a more marked form. As a matter of fact, in every sound human being there is always a dominant idea that regulates his conduct. "The Metamorphosis of Attention," the author says, "into a fixed idea is much more clearly seen in great men," and he quotes Alfred de Vigny's answer to the question, "What is a great life?" "A thought of our youth, realized in mature age." However, a fixed idea is more than a mere dominant thought; it is in marked cases the nearest approach to *absolute* monoïdeism that is attainable with the retention of consciousness. It represents a more or less *chronic* form of hypertrophy of Attention.

In keeping with the methodical character of the book, a feature which everywhere pervades its pages, the author classifies fixed ideas into three categories:—(1) Simple fixed ideas of a purely intellectual nature; (2) Fixed ideas accompanied by emotions, such as terror; (3) Fixed ideas of an impulsive form, known as irresistible tendencies, which manifest themselves in violent or criminal acts. The first of these groups is discussed in detail, and the conditions, arithmomania and onomotomania, are referred to.

Ecstasy is another, a more *acute* form of hypertrophy of attention. In a moderate degree it is after this manner that men endowed with great power of attention are enabled to abstract themselves from the external world. The biographies of several great men are referred to as furnishing good examples of this intellectual state. Monsieur Ribot gives a most interesting illustration, drawn from the "*Castillo Interior*" of Saint Theresa, of concentration of thought progressively reaching, step by step, a condition of *absolute* monoïdeism.

Turing next to atrophy, or abnormally deficient attention, this may be due to an abnormal rapidity and exuberance of ideas, so that all is disorder and no particular state of consciousness lasts even for a moment, as in the case of delirium or acute mania. Or, secondly, it may be due, and this is more frequent, to an absence or diminution of the power of inhibition. Numerous instances of this latter form are met with in hysterical patients, in persons suffering from irritable weakness, in convalescents, in apathetic and insensible individuals, in intoxication and extreme states of bodily or mental fatigue. It is pointed out that deficient attention and motor weakness go side by side, and this is one of the facts on which the author relies to show the motor origin of this mental state.

The last of the three categories of morbid states of attention comprises idiots, imbeciles, weak-minded, and the like, where there is a congenital deficiency, or rather a state of inattention.

We have only been able to touch on the salient features of this interesting little book, but enough has been said to indicate its character and scope. It is, as we have said, small in compass, but it contains a great deal of valuable material, which is well and concisely put, and is all the more welcome in these days of copious writing. Upon the manner in which the translation has been performed we have nothing but praise to bestow. There are none of those inelegant French idioms so frequently seen in even the best translations, and the profit we have derived from the matter has been only equalled by the pleasure we have derived from the style in which it is placed before the English reader. In truth, we are not always fond of the philosophy of the French, which too often has an air of superficiality about it, and sometimes seems to lack the solidity which is so characteristic a feature of the German school. We are, therefore, glad to take this opportunity of bringing under the notice of our readers a work which deals very thoroughly with the matter in hand.

On Aphasia or Loss of Speech, and the Localization of the Faculty of Articulate Language. By FREDERIC BATEMAN, M.D. J. and A. Churchill, London; Jarrold and Sons, 3, Paternoster Buildings. 1890.

The second edition of this work is much enlarged, and has evidently cost the learned author much labour and anxious thought. As is well known, Dr. Bateman ventured, in his "Darwinism tested by Language," to take different views on the localization of speech in its relation to Darwinism from those generally held at the present day by cerebral physiologists. This need not be regretted. It is well to have a critic who will point out what may be the vulnerable points in the armour of the now popular faith. Dogmatism is to be deplored on either side of the controversy, and perhaps Broca had some justification for his sarcastic remark on what he regarded as our Darwinic fanaticism—that we were ready to burn at the stake those who refused to fall down and worship our idol.

The work before us avoids controversial matter in this direction. But the question of the exact cerebral seat of the faculty of articulate language is one which the author discusses, and withholds his assent from the doctrine of Broca.

Dr. Bateman arrives at the conclusion that although something may be said in support of every theory of the localization of speech, there are so many exceptions that none of them will bear impartial scrutiny; that aphasia is not invariably connected with disease of the left anterior lobe of the brain; that when a positive lesion of this region does exist aphasia is not necessarily a consequence; and that both anterior lobes may be extensively diseased without serious impairment of speech. He admits, however, that in the immense majority of cases aphasia has been associated with disease in the left anterior lobe, more especially in the third left convolution or its immediate vicinity; in fact, rendering it altogether impossible to be merely accidental.

At the same time it is maintained that the seat of articulate language cannot be definitely circumscribed, seeing that the island of Reil is frequently affected also, and in a few instances is alone diseased. Victor Horsley is quoted as stating that there is no hard and fast line limiting the representation of any given segment—that there is no area of the cortex over which a particular segment is equally represented throughout, but that in one spot especially, the representation is concentrated, and thence diminishes gradually (p. 355). Goltz (Strassburg) very distinctly objects to the existence of a limited centre for speech in the brain. Brown-Séquard thus writes to Dr. Bateman: "I deny that there is any circumscribed part of the brain specially endowed with the power of expressing ideas by speech, but nervous elements which possess that function are scattered through a great many parts of the brain." Dr. Ball, of Paris, expresses himself much to the same effect: "The brain is not as modern localizers would have it to be, a piano, each key corresponding to a particular note; but it may rather be compared to a violin, on which a skilful artist can play almost any tune upon one single string, when the other strings are cut—a feat actually performed by Paganini." Dr. Bateman may therefore be justified in holding that any definite localization of speech is "not proven," and that the most that can be conceded is that the healthy action of a limited portion of the left hemisphere seems to be necessary for the *outward* manifestation of articulate language.

The question, however, forces itself upon the mind, why is there in the vast majority of cases any relation between Broca's convolution (and its vicinity) and speech? The only reason which experimental physiology appears to give for this relationship is that the motor centre for the tongue and lips is in the third frontal convolution and the island of Reil.

Much more might be said on this most interesting subject, but our space will not allow of an extended review of Dr. Bateman's book. It is one which reflects credit on the industry and impartiality of the author.*

The American Journal of Psychology. Edited by G. STANLEY HALL, President of Clark University. Worcester, U.S.A., and London: Trubner and Co.

This Journal continues to be conducted in the able manner which has marked it from its establishment. It is now in the third year of its existence, and there is every promise of its future growth and success. The articles are usually thoroughly well written, and based on scientific observation; the retrospects of hypnotic literature are especially good and discriminative. We congratulate Prof. Stanley Hall upon the staff he has been able to secure. The first number of the current year contains the following announcement:—"The typography of the Journal has been changed and improved. A new department of minor contributions has been added for briefer records of original observation and research in laboratories and elsewhere, and for historical chapters upon various phases of psychological science. The digests and critical reviews of European literature, which have before formed so important a feature of the Journal, will be continued and made as complete as possible. Their scope will also be enlarged so as to include, besides the fields already represented, the psychological parts of criminology and anthropology. The editorial staff will be increased, and articles of unusual value and interest are promised. The price remains five dollars per year. The first and second volumes will also be furnished unbound at five dollars per volume till further notice."

* The author wishes to call attention to an oversight at p. 234 in transcribing from Dr. Gower's work—the word "optic" having been inadvertently substituted for "occipital." In consequence of this error, the comment upon the word "optic" in the foot-note becomes a mis-statement.

The Anatomy of the Central Nervous Organs, in Health and Disease. By Dr. HEINRICH OBERSTEINER. Translated by Alex. Hill, M.D. London: C. Griffin and Co. 1890.

The Viennese Professor's work is one of great care, and the result of long and accurate observation. The translator deserves the thanks of all English students of brain and cord structure for having prepared so excellent a translation of this admirable book. As to the illustrations, it is impossible to speak too highly of them. The plan of giving a skeleton outline of the various structures adds greatly to the facility of understanding the anatomy of the part described.

Such a work as this brings home to one the enormous progress made in the modes of examining and the manner of illustrating the tissues of the organs of which the nervous system is composed. This handy volume before long will, we doubt not, have a large circulation; it certainly merits it.

The National Medical Dictionary. By JOHN S. BILLINGS, A.M., M.D., LL.D., D.C.L. Oxon. Edin. and London: Young J. Pentland. 1890.

A New Medical Dictionary. By GEORGE M. GOULD, B.A., M.D. London: H. K. Lewis. 1890.

Terminologia Medica Polyglotta, ou Dictionnaire International de Termes. By Dr. THEODORE MAXWELL. London: J and A. Churchill. 1890.

This is the age of Dictionaries. The mass of knowledge to be acquired and the need of constant reference render them absolutely necessary.

No one can possibly have greater opportunities at his command than Dr. Billings, of Washington, who, with a large staff of assistant-editors, has prepared the work at the head of this notice. A very large addition has been made to the number of medical terms contained in the completed dictionaries now in use. The definitions are doubtless brief, but they are as full as can be looked for in a dictionary of this size, which does not profess to be an encyclopædia. It will no doubt be added to every public library, and be eagerly bought by a large number of private individuals in Great Britain as well as in America.

The second on the list includes all the words and phrases

used in medicine, with their proper pronunciation and definition. The author, Dr. Gould, is the ophthalmic surgeon to the Philadelphia Hospital, and Clinical Chief of the Ophthalmological Department, German Hospital, in the same city. Elaborate tables of bacilli, etc., as well as of weights and measures, and thermometers, with much other useful information, carefully classified, are given. Useless and obsolete words are eliminated, and words created during the past decade are added. There is a useful table of prefixes and suffixes. We have found on reference to recent words that they mostly find a place in the dictionary.

Dr. Maxwell's work is highly meritorious, and must have involved a painful amount of labour. It is of international importance. French has been chosen as the foundation, and French words have consequently been translated into Latin, English, German, Italian, Spanish, and Russian. It is necessary that the reader should know a little French if he wishes to gain every advantage from the work. It is rich in synonyms. There is no dictionary in the world like it. Its moderate price (20 francs) places it within the reach of the profession generally. It would be lamentable if such a painstaking and accurate work were not to meet with the success which it certainly ought to achieve.

Nervous Exhaustion (Neurasthenia): Its Symptoms, Nature, Sequences, and Treatment. By GEORGE M. BEARD, A.M., M.D. Edited by A. D. Rockwell, A.M., M.D. London: H. K. Lewis. 1890.

Whatever opinion may be held in regard to the necessity of introducing the word neurasthenia, all will admit that a number of cases present the symptoms of nervous exhaustion. Again, while there is a general feeling that the subject has been so much written upon during the last few years, that readers themselves are in danger of exhaustion, it is true that there has been an advantage in the more definite grouping of the cases which Dr. Beard desired to include under Neurasthenia. It is convenient to have in a handy form the work which is especially associated with this author's name. The malady is treated in a systematic manner. We have the symptoms defined, among which are included topophobia, claustrophobia, agoraphobia, anthropophobia, monophobia, phobophobia, mysophobia, and pantaphobia. The love of

labelling all the morbid symptoms to which man is subject no doubt carried to an absurd extreme, and if this multiplex terminology is accepted, it must be on the understanding that it is merely a *mariage de convenance* between terms and symptoms without any necessary pathological union. The nature and diagnosis of nervous exhaustion follow, and afterwards the prognosis, sequences, and treatment of the malady. The diagnosis between neurasthenia and lithæmia is described at some length. Lithic acid is found in both conditions, or rather may be in the former and not the latter, and cannot therefore enter into the distinctive signs. The character of the mental phenomena in the two affections is of most importance. "Both the lithæmic and neurasthenic suffer from mental depression, and the profound sense of misery is more marked in the former than the latter condition; while, however, the neurasthenic may suffer from the deepest melancholy and imagine himself heir to a thousand ills, he becomes the victim, as a rule, of no such irritability and unreasonable outburst of temper as the man whose brain is actually poisoned by the imperfectly transformed products of digestion. The neurasthenic may be at times extremely irritable, but this irritability is more passive than active, and any ebullition of angry feeling is quite evanescent. His demeanour is, as a rule, quiet, and there is but little manifest tendency to make those dependent upon him miserable by his words and actions. The touchy mood of the lithæmic, on the contrary, may last for days or weeks. It is due to actual toxæmia, is often, if not generally, accompanied by obstinate constipation, and may be relieved completely by the action of a cholagogue cathartic," p. 144.

The reader must study the book itself if he wishes to know how very much is comprised under the term which has now become so familiar.

Headache and Neuralgia. By J. LEONARD CORNING, M.A., M.D. London: H. K. Lewis. 1890. 2nd Edition.

This edition contains an appendix on eye-strain as a cause of headache, by Dr. David Webster, the professor of Ophthalmology in the New York Polyclinic, which is valuable.

Dr. Corning's treatise includes a disquisition on normal and morbid sleep, which is of more immediate interest to the psychologist.

The physiology of sleep is fully discussed, due reference being made to Mr. Durham's article in Guy's Hospital Report of 1860, and it is shown that the experiments of others have subsequently confirmed his position. The author's own researches are given showing that the supply of blood to the brain is in direct proportion to the amount of its functional activity. The consideration of insomnia naturally flows from the foregoing. The study of dreams is interesting, but brief, although the author apologizes for undue prolixity.

A System of Practical and Scientific Physiognomy ; or, How to read Faces. By MARY OLMSTED STANTON. Two Vols. Philadelphia and London : F. A. Davis, 1890.

These two handsome volumes excite hopes in the "lovers of science" and "the earnest and enthusiastic searchers for truth throughout the world," to whom they are "affectionately dedicated," but we regret to say that these hopes are not fulfilled. The work is the reverse of "scientific," and inasmuch as it is not based on science, it fails to be "practical." We must admit that there are a large number of illustrations, which retain their interest, whatever may be thought of the text. Under the portraits of distinguished personages are statements of the development of the head, which are singular proofs of the extraordinary ease with which pseudo-science may blind observers who have already made up their minds as to what to find. Thus the author has no hesitation in making a note under the portrait of Darwin, that "the nose exhibits large signs of mental imitation, analysis, ideality, sublimity, acquisitiveness, and constructiveness, while veneration, executiveness, and self-will are only of average size. Form and size are very large. Observation is most uncommonly developed. Locality, memory of events, reason, and intuition are of the highest order." If the lady would allow herself to make similar records of the heads and faces of a number of persons about whom she knew nothing, she might discover that her description no longer tallied with the real individuals portrayed. With this test of the truth and worth of the system of which this book is an exponent, she would discover that her house was built upon the sand. One can only regret, that so much labour by one who has been impelled to write this work

"by an earnest and religious regard for the welfare of mankind," should not have been expended upon a really careful study of the correlation between the character and the external forms associated with it.

Selecta à Præscriptis: Selections from Physicians' Prescriptions. By JONATHAN PEREIRA, M.D., F.R.S. 18th Edit. London: J. and A. Churchill. 1890.

The Extra Pharmacopœia, with the additions introduced into the B.P., 1885. By WILLIAM MARTINDALE, F.C.S. 6th Edit. London: H. K. Lewis. 1890.

A new edition of Pereira's well-known little book will be welcomed by the student and the general practitioner. It has been carefully revised and the nomenclature made to correspond with the present pharmacopœia. There ought to be a copy in every asylum, public and private. No doubt a new edition will be called for before long, the value of which would be increased by the introduction of a larger number of new remedies into the prescriptions.

"The Extra Pharmacopœia" is rich in the enumeration of modern as well as old fashioned drugs, and is indispensable to all engaged in medical practice, whether general or special. So recent a drug as chloralamide is introduced as a useful hypnotic, and it is stated that continued use does not require an increase in the dose.

L'Hydrothérapie dans les Maladies Mentales. Par le Docteur JUL. MOREL. Gand. 1889.

Dr. Morel has added to the hydropathic literature in relation to mental disorders a practical treatise which will be welcome to all who, engaged in the treatment of insanity, desire to make use of this powerful agent in a definite and scientific manner. It must be admitted that the mental physician who sends what he regards as suitable cases to hydropathic establishments, is frequently disappointed. That, however, which may fail in such institutions may succeed in asylum practice.

The author maintains that the water treatment favours the diminution of the afflux of blood to the brain in contract-

ing the calibre of the vessels either directly or by reflex action. Cold applications secure this result. Inversely hydrotherapy may favour the circulation of blood in the brain, either by lessening the general excitability by the employment of tepid baths, and the wet pack of Preissnitz, and thus securing at once a refreshing action, and a calming and derivative effect, sometimes even sleep either by increasing the action of the heart, by the application of warm compresses on the head, by moist frictions of 20 to 28° C., the douche of short duration, or by sitz-baths, with cold water affusions followed by friction, even by lotions and ablutions at a temperature of 15 to 25° C., followed in their turn by powerful rubbing. Under this influence a true awakening of the functions, which resume their normal state, and regenerate the whole organism, is induced.

Morel includes, in his remarks on treatment, neurasthenia, hypochondriacal insanity, chorea, with mental symptoms, hysterical insanity, epilepsy, melancholia, mental stupor, mania, and general paralysis. We must, however, refer the reader to the treatise itself for a discriminating opinion in regard to the value of the water treatment in mental disorders.

A Course of Lectures on the Growth and Means of Training the Mental Faculty. By FRANCIS WARNER, M.D., Lond.
Cambridge: At the University Press. 1890.

These lectures were delivered at the request of the Teachers' Training Syndicate in the University of Cambridge. It is a satisfactory indication of the readiness teachers now happily show to obtain help from medical men who have made mental faculty in relation to the physical development their special study. The book before us contains much valuable information and ought to be in the possession of all school-masters, and within reach of all the teachers. Various tables are appended which will be useful as guides for other observations, as well as instructive from the results reached by the author and others who have examined a large number of boys and girls in the elementary schools. A catalogue of a museum of Natural History indicates to teachers new methods of training their powers of observation, and making inductions; it also suggests methods of conducting object-lessons and science classes.

The Criminal. By HAVELOCK ELLIS. Contemporary Science Series. W. Scott. London. 1890.

The author in his preface says: "This little book is an attempt to present to the English readers a critical summary of the results of the science now commonly called criminal anthropology. In other words, it deals briefly with the problems connected with the criminal as he is in himself, and as he becomes in contact with society; it also tries to indicate some of the practical social bearings of such studies." This is a very modest description of a most excellent endeavour to interest medical and legal students as well as philanthropists of all sorts in criminals as human beings of a special class. Mr. Ellis begins with a history of the work done and of the workers in this comparatively new science, and naturally. We join with him in his regret that though England was early in the field, of late she has lagged terribly behind, and has left all later researches to others.

The most fertile workers have been the Italians, who seem still to have the genius for law as well as for construction—they are the architects and the law-givers of the world.

We trust that among the members of our Association some will make use of the abundant means at their disposal, and try once more to place England among the leaders in investigating criminal anthropology. We shall not attempt to analyze the book under review, for it is so concise, handy, and cheap, that all interested in the subject should buy it and read it for themselves.

It points out what has been done, and by whom; it gives copious references to the authorities, and in methodical detail examines the results obtained, and impartially judges of their value.

It is judicial, not attributing too much to the tyranny of our organization, or neglecting the slightly aberrant types which sporadically occur among man as reversions to a lower type of development.

Composite and other photographs are given, and the plates with the types of criminal heads are very well worth study. We are not very much impressed, so far, with the results of composite photographs, and, perhaps from our want of knowledge, have never been able to appreciate their practical value. Some of the illustrations are more diagrammatic

than realistic, and are not artistic, but they serve their purpose.

The criminal is dissected and studied, the form and size of head, the peculiarities of features, and any special relationships which seem to exist between certain physical or physiognomical defects and certain criminal types are investigated. Moral, emotional, and intellectual peculiarities are recorded, and the important question of treatment is fairly faced. We have not yet reached the state of treating all crime as disease, nor have we reached Plato's ideal of destroying the noxious and incurable criminal; but both in America and Europe a strong feeling is spreading that there are certain physical or physiological criminals to whom short punishments are of no use; some who are and will ever remain irreclaimable criminals, and who should be permanently taken care of. We shall never be able to condemn a man because of his hang-dog look, but we may be able to advise the constant supervision of individuals who have sinned against society, and who are also physically defective. We strongly recommend this book to our readers as a satisfactory hand-book.

The Son of a Star, a Romance of the Second Century. By BENJAMIN WARD RICHARDSON. Three Vols. London: Longmans, Green and Co. 1888. Ditto in one Volume. 1890.

This is an interesting book, and by no means an everyday novel or romance. The author likens it to a dream; "all that is said and done is sudden, abrupt, jerky, and more or less involved." This is true, and a dream of this kind, however interesting, would be rather disturbing. Tom Moore's heroine in "Rich and rare were the gems she wore" must have lived at the period which Dr. Richardson describes in Juverna—the island of Peace and Beauty, where there is neither wealth nor poverty, where the flowers and musical instruments make the heart gladder than wine, which is as unknown in the pure Juverna as the poisonous reptile which cannot live on the soil (Vol. ii., p. 261).

We cannot sketch even in outline the story which the author weaves, but it may be said that it opens with a

great gathering in Western Britain in the time of Hadrian, when Severus—not the Emperor—was the British Governor. A mighty encampment, of which the remains can be traced to the present day, is described. It is the grand circus of the legions of Britain. A vast multitude are assembled, and we clearly recognize two separate and hostile races, “the Roman, close built, sturdy-limbed, broad faced, and round headed, which contrast strongly with the tall, lithe, long-limbed body, and high, pointed, long head of the Briton. But the grand distinction is in the expression of the face of the two orders who make up the multitude, a distinction terribly declared when the clarions ring the order for the procession of the gods. . . . To the Roman the procession is a solemn religious rite, whilst to the Briton it is a solemn mockery forced on him until it pierces him to the soul. The Briton has for ages worshipped the sun, moon, and stars. His great god is one god who from earliest times has given himself to mankind as fire.” He, therefore, despises the worship of these sticks and stones called gods, whom he is compelled by the sword to appear to worship. There are many Jews among the Romans in various positions of trust concealing their own beliefs. Also a wonderful couple who might have alighted from the skies. They are a father and daughter, beautiful and good and more civilized than anyone in the book; they come from Juverna. The girl, Erine, is one of the heroines of the story. Huldah, the other, is a Jewess of equal beauty and goodness, but of wonderful force of character, who performs wonderful cures of faith-healing.

The hero of the tale is a Semitic youth named Simeon, who first appears upon the scene as a combatant in the arena, and who disappears from our view conquered, but happy in that his very servitude brings him into companionship with his beloved. How for a brief while, between the arena and the slave market, he poses as the leader of a Syrian insurrection, and as the new saviour of Israel, we must leave Dr. Richardson to tell, though we may congratulate him, in passing, on the rare skill with which he has made his hero condescend, to some, at least, of the tricks of the charlatan without robbing him of our admiration, interest, or respect. The fanaticism of his followers, the cunning and scheming of his immediate *entourage* are admirably depicted, and while the element of a blind fatalism is carefully avoided, we feel throughout how all the

actors in the tragedy of Judah's last struggle are creatures of circumstance, helpless before the Time-Spirit, which has terminated the glories of Israel, and ere long will announce to the victorious Roman that his time, too, has passed. Perhaps Dr. Richardson is least successful in his attempt to represent the Greek element in his romance. Touching and beautiful as is the death of Antinous, we cannot but feel that the note here struck is not quite a true one. The youth's sacrifice is animated by a romantic and chivalric spirit, which is peculiar to a Christian epoch and a Gothic race. Moreover, on this ground Dr. Richardson challenges comparison with Professor Hausrath, who in his historical novel "Antinous" has dealt with this strange and fascinating episode in a manner at once deeply moving and historically possible. More than Professor Hansrath has hinted to us can never now be known; enough for us that though "the ivory body of the Bethyman slave rots in the green ooze of the Nile, and on the yellow hills of the Cerameicus is strewn the dust of the young Athenian," yet for ever "Antinous lives in sculpture and Charmides in philosophy."

We reach surer ground when we come to Dr. Richardson's delineation of the Roman character. Here, too, comparison is courted, and with no less a master than Whyte Melville, whose "gladiators" will be recalled by the fighting and many other scenes in the present work. But the comparison is not to Dr. Richardson's disadvantage. No writer of the present century has understood better the Roman soldiery or the pagan life of the Roman decadence, and if his Hadrian is not quite so living or so true as Professor Hausrath's study of the same Emperor, he has a clear advantage over his famous German rival in the possession of that "divine afflatus" which in some degree at least was given to the Cæsar, but which an unkind fate has quite denied to the eminent Teuton. We refer to the poems which Dr. Richardson puts into the mouth of Hadrian, and which are singularly felicitous in their reproduction of the pensive, dainty, and somewhat "precious" note of the lover of Antinous.

The song of Lyricus to "Absent Friends" is worth a bushel of our modern ballads, and would set excellently to music, but the little piece "My Heart's Desire," which Dr. Richardson puts into the mouth of Hadrian himself, is in the very spirit of him who gave us the "Animula, vagula, blandula."

This beautiful piece has probably cost the author less labour than most other parts of the book; yet it will probably live longer, for, sooth to say, the Semitic personages, for all the care with which they are presented, fail to hold our interest permanently. Moreover, the dithyrambic outpourings of the Jewish poets will hardly bear removal even into the comparatively kindred air of historical tragedy.

There is the fine and tender touch of the man of feeling, something of the secret of the Great Physician Himself, in a little passage in Chapter XXIX., where Hadrian, peevish, fretful, and selfish, forgets his own anxieties in the illness of Antinous, and "he who a moment ago was the patient becomes the physician." In the same chapter, and in close connection with this finely-noted incident, we have another lyric, the sweet, grave note of which strikes us as possessing both originality and insight in that degree which separates for good and all the poet from the poetaster. We regret that our space does not allow of transcription.

Having aroused the reader's interest by these few remarks, we have gained our object if he is induced to acquaint himself with the course of the story as told by a writer who is able to draw upon so remarkable a store of past history, whether British, Roman, or Jewish. The surprising thing is that he should find time to indulge in historical romance and poetry in addition to his professional, editorial, and other occupations. A story like this is not without its psychology. This we leave the reader to trace in the pages of "*The Son of a Star*," while for ourselves we must "awake from our vision and turn our faces once more to the world of common life in which we move and have our being."

Sanity and Insanity (with Illustrations). By CHARLES MERCIER, M.B., Lecturer on Insanity at the Westminster Hospital Medical School, and at the Medical School for Women. London: Walter Scott. 1890.

This is the last addition to the "Contemporary Series," so well edited by Havelock Ellis, and it is a very good addition. Dr. Mercier's book may be praised without stint, and will be largely read, we have no doubt. We give it a cordial welcome, and commend it to our readers.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *Asylum Reports for 1889.*

Up to the time of writing, comparatively few reports from English asylums have come to hand. This is, no doubt, due to the requirements of the Local Government Act in regard to the preparation, auditing, and publication of accounts. As might have been expected, no uniform arrangement has been adopted. Some asylums have printed their report as in years past; others will publish their accounts up till 31st March, but without auditing; and others will defer publication till the Government Auditor has examined them. When these will appear is a matter of speculation.

Aberdeen Royal Asylum.—The mansion house at Daviot, purchased in 1888, is being rapidly prepared for the accommodation of patients, forty of whom have been already transferred there. It is Dr. Reid's intention to use this branch asylum for the treatment of dipsomaniacs and drunkards, for which purpose it appears to be admirably suited.

Twelve deaths were due to general paralysis. No fewer than six of these occurred in women.

Argyll and Bute.—The numbers resident have been reduced by the discharge of 40 out-county and private patients, and by the boarding-out of 21 pauper cases.

Dr. Cameron reports that an unusual amount of sickness prevailed during the summer. Eight cases of erysipelas occurred. The origin of the outbreak was not discovered. In only eight of the 23 deaths was the cause verified by post-mortem examination.

Barnwood House.—It is reported that this hospital has been full during the year, and that many applications for admission had to be declined. The structural improvements are now completed, and the result is stated to be extremely satisfactory.

The following paragraphs from Dr. Needham's report, throwing cold water on the Brudenell Carter Committee, will be read with interest:—

Much discussion has of late been maintained upon the question of the establishment by the London County Council of a hospital for the investigation and treatment of mental diseases, such hospital to be conducted upon principles similar to those which regulate general hospitals; to have a body of visiting physicians and surgeons as well as the usual resident staff; and to be equipped with every conceivable appliance for pathological investigation and the treatment of disease.

The scheme may be good or bad; capable of leading to useful practical results, or destined to end only in failure or disappointment. But it was surely unnecessary to support its claims to a tentative existence, by the assertion by some of its advocates that the hospital or asylum of to-day is a mere place of

detention, in which no good work is being done, no successful efforts made to treat mental disease in the light of modern scientific medicine.

The results of treatment in this, as in most other asylums throughout the country, are a sufficient reply to such an assertion. It must be remembered, also, that the *medical* treatment of insanity forms but a small part of those general curative influences which are brought to bear on the treatment of a disorder which embraces all the functions of a complex organization. Its successful treatment requires the co-operation of all those moral and material influences which can be secured only in an establishment in which every department is organized and worked around a common focus which centres in this object.

An outbreak of scarlet fever occurred, affecting 11 attendants and 13 patients. The disease was of mild character and in no case did death occur.

An additional special out-door attendant has been engaged in promoting the employment of patients in the garden and grounds, and an increased number of them have been induced to take advantage of it.

There are abundant evidences in this report of the enterprise displayed in, and the success attending, the administration of this hospital.

Bethlem Hospital.—When Dr. Percy Smith reports that the past year has been a very quiet one when compared with 1888, during which there was such a mighty and quite unjustifiable uproar about restraint, we feel perfectly sure that he has not been tempted to abandon a most valuable form of treatment when not abused, because of the attacks made on him and his predecessor.

May brain-surgery *cause* insanity? A few paragraphs in Dr. Smith's report bear on this burning question.

One male patient was admitted from the National Hospital for Epilepsy and Paralysis with some excitement and exalted delusions, which had appeared subsequently to the operations of trephining the skull and ligature of the common carotid arteries for supposed tumour of the brain, associated with severe headache. The headache had been greatly relieved by the operation before admission, and he recovered from his insanity in this hospital, but he subsequently died of phthisis on his return to his home in America. This case of insanity supervening after operation on the skull is interesting, in relation to the fact that quite recently the same operation has been performed with the object of giving relief to some of the symptoms of general paralysis of the insane. It would seem to be very doubtful whether this operation is of any advantage or is justifiable in this grave disease, and at present I have not felt inclined to adopt the practice here.

One female patient, who had before admission cut off her right hand in obedience to the biblical command as to an offending member, succeeded in getting her only hand out of a padded and locked canvas glove, and in a very short space of time completely removed her right eye. The accident is, of course, most lamentable, but for a time her mental condition seemed to improve, as she felt most thankful she had fully completed her duty. Her perfect mental recovery is, however, unlikely.

During the year considerable use has been made of the new drug sulphonal, for the production of sleep and control of excitement, and, on the whole, with very satisfactory results. It has appeared to be very valuable for senile cases with excitement, and several such cases owed their recovery, I think, to its use.

Birmingham. Winson Green.—Dr. Whitcombe delivered a course of lectures and instruction to the nurses and attendants during the year with, he believes, good results.

We reproduce the following paragraphs from his report, and though tempted to add some criticism as to the appointment of consulting (non-mental) physicians, we abstain from doing so except to remark that we suppose he has the power enjoyed by all asylum physicians of calling in professional assistance whenever he thinks it required. However, the intention is laudable, and we shall watch the future recovery rate as anxiously as the Egyptians that of the Nile in summer.

Post-mortem examinations were made in 81 out of the 92 deaths which occurred. In making this statement an oft-repeated thought again occurs, as to the waste of much important pathological material from the want of more time on the part of your Medical Officers to devote to it. There is a field here for considerable useful and scientific work, and although I have not ventured hitherto to suggest the desirability of appointing an officer here as pathologist, I think the time has arrived (especially looking to the large amount of additional work which the new Lunacy Act will place upon the superintendents of asylums) when I should recommend the appointment of a second salaried assistant medical officer, who should be a pathologist. Such an appointment would be advantageous to your institution, and may probably in a few months become a necessity.

With a view to carry out more efficiently hospital treatment of the insane, I propose, with your sanction, to convert one of the large wards on each side of the house into a hospital ward for the reception of acute cases, instead of the smaller wards now in use for that purpose.

To make our efforts more complete in this respect, I beg to suggest the appointment of two honorary consulting physicians to the asylum, who should visit the asylum in order to see all recent cases and consult with your resident medical officers as to the physical condition of such cases, and their treatment.

The mental weakness of the insane is often closely connected with their bodily condition, and although asylum officers may usually be credited with a larger knowledge of the developments of insanity than is possessed by the physician in ordinary practice, it may be that the wider experience of the latter in bodily diseases may sometimes throw light upon the hidden causes of the mental disturbance, and consequently upon the best line of curative treatment in the individual case. I do not suggest that these honorary physicians should be regarded as official asylum visitors, or should take any part in the general management of the institution. Whatever is done in this respect can be experimental only, but if it should be adopted, and should succeed so far as to improve the rate of recovery, it will rank as one of those advances in the treatment of insanity which reflect credit on all connected therewith.

Birmingham. Rubery Hill.—Dr. Lyle records a remarkable example of criminal folly on the part of a patient's relatives:—

One patient made a very determined attempt upon his own life by swallowing the contents of a small bottle of hydrochloric acid and zinc, used in the jewellers' trade. This patient had been supplied from the outside by his friends with this poisonous liquid a few days before, and it was not until he had made the attempt on his life that we were aware it was in his possession. The bottle being very small he concealed it in his tobacco box, underneath his allowance of tobacco. Fortunately it was found out immediately he had taken it, and by prompt medical treatment he was brought round, although at one time he was considered to be in a dangerous state.

In Table III., in the column of Percentages of Recoveries on admissions, there are some obvious errors which demand correction next year.

Bristol.—The administrative and residential portion of this asylum is to be rebuilt at an estimated cost of £36,000.

Broadmoor Criminal Asylum.—Concerning mechanical restraint, Dr. Nicolson says:—

The question as to the employment in lunatic asylums of what is known as mechanical restraint occupied a considerable amount of public attention last year.

The legitimate or justifiable use of mechanical restraint is one thing, the authorized abuse of it is another.

The sanction of modern times in this country is clearly against the use of mechanical restraint; and very properly so, in recollection of the extent to which it was carried in days gone by. The existing practice is, as a matter of fact, in accordance with this sanction; and the exceptions, where this form of restraint is used for other than surgical reasons, are sufficiently few to afford the best proof of the rule. Besides sanction and practice, an element of sentiment has crept into the matter which would fain make it of the nature of a crime to use mechanical restraint at all, unless, perhaps, in surgical cases.

Mechanical restraint is practically unknown at Broadmoor. It was, I believe, used on a few occasions in the early days, but for over 20 years it has been found possible to do without it. The comparatively numerous staff of attendants at this asylum enables exceptional strength to be brought to bear when occasion requires it; but my own feeling in the matter is that in a case of continuous and long-sustained maniacal violence, with an activity avowedly and determinedly homicidal, it is possible to carry the non-restraint principle (so called) too far and at too great a cost. Few people who have not been engaged in it are able to estimate the wear and tear of nerve and heart which a tussle with a desperate lunatic of this sort means to the attendants, apart from the risk of positive injury either to patients or warders. And when this struggle has not only to be anticipated, but to be engaged in several times a day for a lengthened period, the justifiability and humanity of simple, effective, and safe mechanical restraint become apparent. If ever it should be my lot to be a lunatic such as the one whose treatment is here in question, I hope my good friend the superintendent who has me in charge will not be too squeamish about recent traditional usage, but will see that I am checked by the minimum, but necessary, amount of mechanical restraint to ensure my own safety and that of others. On the one hand, I do not wish to think that under any circumstances I should be the means of inflicting injury upon my attendants; on the other hand, I would infinitely prefer mechanical restraint to the long-continued manipulations, however skilful and friendly, of four or more attendants heaped together upon my prostrate form.

I have thought it right to dwell at some length on this subject as public reference was made to Broadmoor practice in the correspondence that took place.

I have no intention of breaking our long record by the introduction of mechanical restraint if I can possibly help it. If I should be compelled to have recourse to it in any case it will be because I regard it as the kindest, the most humane, and the least harmful mode of treatment under particular circumstances.

The evil to be feared with regard to the employment of mechanical restraint is lest its legitimate use should lead to its authorized abuse. This could never happen if, in every case, the medical superintendent himself were to order it to be used, and that only after careful and complete personal investigation. When

the restraint is applied by underlings and its use afterwards sanctioned by the responsible officers, we have the authorized abuse which is altogether wrong and reprehensible.

Carmarthen.—Dr. Hearder records the recovery of a patient who had been insane four years ; of another who had been insane five years ; of another after nine years ; and of another who had been resident in the asylum nearly 20 years.

Cork.—The Privy Council has sanctioned a loan of £28,428 for additional accommodation for 430 patients, for improving the water supply, and for other necessary structural alterations. A new dining hall has been opened. It measures 89 ft. by 113 ft.

Derby. County.—In his report Dr. Lindsay refers to pensions, a subject he has taken a special and most beneficial interest in. He says :—

With regard to the question of pensions, the County Council, on 10th July, passed the following resolution :—“That subject to the statutory provisions of Sections 119 and 120 of the Local Government Act, 1888, no officer of this County Council appointed at this meeting or hereafter shall be entitled to a pension on quitting office. This resolution shall not apply to the Police Superannuation Fund.”

An amendment, proposed by Mr. A. F. Hunt, was also carried, to exempt from the resolution attendants and nurses at the lunatic asylum, so as to render them eligible for pension as well as the police.

In connection with this subject, I may refer to the first County Asylum Special Pension Scheme, which has not yet, so far as I know, been passed by any County Council. I allude to the report containing a pension scheme for the staff of the Northampton County Asylum, at Berrywood, which was prepared by the Asylum Committee of Visitors, signed by Lord Spencer, Chairman of the Northampton County Council, and passed at the meeting of the County Council on 30th January.

It is a very fair, just, and reasonable scheme, well worthy of careful consideration by other County Asylum Committees and County Councils.

It recognizes the various Acts of Parliament bearing upon asylum superannuation, admits the justice and sound policy of granting pensions, and acknowledges the claims of the asylum staff to special consideration on account of the arduous, trying, and wearing nature of their duties and the risks to which they are exposed.

This scheme contains a fixed scale of pensions, within defined limits, for certain periods of service, a certain age for optional and compulsory retirement, provision for permanent incapacity on account of ill-health, a schedule of the officials in two classes, and the scheme is applicable alike to the old and the new officials.

The Commissioners report that :—

Two females and one male have been restrained, each once ; the male from 19th January, 1889, to 16th February last, to prevent self-mutilation. One woman for two nights and a day to prevent her pulling out her hair and injuring herself, the other woman for 39 hours, because she was dangerously violent to herself and others. They were all restrained by the Jacket. The woman last mentioned is convalescent, and when speaking to us, remembered her restraint and spoke gratefully of it, which appears to have been quite necessary, and to have, in fact, saved her life.

Conollyism does not seem to be in vogue in Whitehall Place.

Derby. Borough.—This, the first report, contains (what every report ought to contain) a very useful ground plan of the building. Dr. Macphail's report includes a description of the site, structure, and general arrangements. We wish him success.

Dundee.—Dr. Rorie gives some particulars about a case which attracted a good deal of attention in Scotland. The patient had been a soldier, had been in India, had had sunstroke, had hallucinations of sight and hearing, had delusions of suspicion, and occasional paroxysms of great excitement and mental confusion, during one of which he stabbed his wife. Concerning his custody before trial, Dr. Rorie says:—

We are rather concerned, however, as to the manner in which this patient was sent to, and removed from, the asylum. He was sent to the asylum at the instance of the Governor of the Prison, and with the concurrence of the Procurator-Fiscal, on 4th April, 1889, under the Criminal and Dangerous Lunatic (Scotland) Amendment Act, an Act passed in 1871, and having for its principal object the treatment of prisoners found insane in ordinary lunatic asylums. The treatment of the prisoner does not, however, seem to have been had in view, but only his safe custody; as on the 20th April he was examined before the Sheriff, found incapable to plead, returned to the asylum, and on the 23rd April he was transferred to Edinburgh Prison under special warrant granted by Lord Kinnear, there being no statutory powers existing for such a transfer. I will merely remark in connection with this case that, if the safe custody of insane prisoners is all that is to be desired, there seems no reason why a lunatic ward should not be attached to local prisons as well as to the General Prison, Perth, although unquestionably the proper remedy would be the provision for Scotland of a Criminal Asylum equipped with all the modern appliances for the *treatment* as well as the care of the insane prisoners, similar to the asylum which has been already provided for England at Broadmoor, and in which not only insane prisoners, but also those exceptionally dangerous cases which from time to time appear in ordinary asylums and amongst ordinary patients could be treated and specially cared for.

Exeter.—Separate wards have been fitted and furnished for the reception of private patients, and the Committee have decided that such patients should be received at a uniform rate of £1 per week. The experiment so far has been successful, as is shown by the fact that the number of private patients has been more than doubled; and the Committee are of opinion that when the excellence of the accommodation and the successful treatment at the asylum become better known the vacancies for private patients which now exist will speedily be filled.

Dr. Maury Deas thus expresses himself in regard to mechanical restraint:—

Eleven of those admitted were in bad health and very weak; 5 were in a most critical state, requiring the most assiduous care and nursing; and it is gratifying to record that 4 of these have recovered both bodily and mental health. In 9 of the cases admitted there was marked suicidal tendency, and in some of these the propensity to self-destruction or mutilation was so determined as to cause much anxiety, and tax the resources and watchfulness of those responsible to the utmost. In two cases especially the morbid impulse to self-injury was so strong that I did not hesitate to resort, for a considerable

time, to the employment of what is termed "mechanical restraint," in the form of a dress, constructed so as to restrict the free use of the arms and hands. This I did both for the sake of the additional protection thus afforded to the patients against themselves, and also, I feel bound to say, to give some relief to the great, almost intolerable, strain and responsibility devolving on those having the care of such cases.

One of these patients is now convalescent, the other is much improved.

Restraint of some kind is the basis on which all treatment of the insane, whether legal or medical, is based; and the enlightened modern treatment of the insane does not lie so much in the abolition of restraint, as in the carrying out of various kinds of restraint, under constant and humane supervision. "Manual" restraint; the restraint of drugs, or what has been called "chemical" restraint; and the restraint of discipline and restrictions, need as much care and discretion in their use, and are as liable to be abused as "mechanical" restraint.

A physician, having the responsible care of the insane, ought to be as free to employ "mechanical restraint" when he deems it the best treatment in a particular case, as he is to use powerful drugs, or any other recognized mode of treatment.

The special advantages of confining the hands by mechanical means in certain cases are that the restraint is continuous while in use, it is always vigilant, it does not lose its temper, and it avoids the many risks attendant on manual restraint.

For myself I do not hesitate to say that there are cases in which "mechanical" restraint is not only the best and most humane treatment, but in which there is a grave responsibility attaching to the man who refrains from using it. I have never regretted the use of "mechanical" restraint when, after full consideration, it has been resorted to; but there have been, in the course of my experience, cases in which afterwards I regretted that I had *not* used it.

Fife and Kinross.—The thorough remodelling of the sanitary arrangements of the main building is in progress.

Dr. Turnbull makes the following remarks on mechanical restraint:—

One feature of last year's admissions has been the occurrence of two cases in which it has been thought advisable to employ mechanical restraint by means of the *camisole*. Some time ago a correspondence on the use of mechanical restraint in dealing with the insane appeared in the London Press; and thus attention has of late been more particularly directed to the question. It is sometimes urged that such restraint is liable to be much abused, and that practically it need never be resorted to except for surgical reasons. In connection with this, it is worth noting that the use of mechanical restraint in an asylum has to be recorded in a statutory register, which is inspected by the Visiting Commissioner in Lunacy; while in some general hospitals restraint is used very much more freely than in any asylum, and is not recorded in any way or subject to official inspection. In the Fife and Kinross Asylum the feeling has, I think, always been that the question resolves itself into one of safety for the patient. When the dangerous insane impulses can be efficiently controlled by other means, as is possible in the great majority of cases, mechanical restraint is unnecessary, and, therefore, ought not to be used. But in those extreme and comparatively rare instances in which all other means fail to secure the safety of the patient, mechanical restraint is justifiable, and, indeed, advisable. Thus it is resorted to as the last expedient, and is restricted as much as possible, but is not altogether dispensed with. In the two cases referred to above great restlessness and violence were associated with strong suicidal impulse, making it necessary to guard against attempts at self-injury on the one hand, and against

the patients' violence and the risk of unintentional injury in controlling them on the other; and, therefore, restraint by the *camisole* was used from time to time to tide them over the more acute exacerbations of their illness. Consequently, the entries in the register of restraint are numerous during last year, while at other times it has been possible for long periods together to dispense entirely with mechanical restraint in the management of the patients.

Glasgow Royal Asylum.—The Directors have very wisely determined that at the soonest possible date pauper patients are no longer to be admitted. Gartnavel will then be a Lunatic Hospital, and it is intended to utilize the spare accommodation by receiving private patients at the lowest possible rates. There are already in the asylum 138 private patients, who pay £40 a year or under, and the Directors feel that in meeting the wants of the least affluent class of the community they are best fulfilling the philanthropic intention of the institution.

The following paragraph is from Dr. Yellowlees's report. It refers to change of type of mental disease:—

As to the type of insanity in the new cases, it seems certain that mental as well as physical disorders are less sthenic than they used to be. Assuredly there is a wonderful contrast between the admissions to our asylums to-day and those of thirty years ago. The acute and violent mania then so common has become very rare, and melancholia is the prevailing type. This change is often complacently attributed to changed methods of treatment, and to the greater freedom and increased amenities of the modern asylum. Our unquestionable advances in these respects might explain, and do explain, the more rapid subsidence of maniacal excitement after admissions to the asylums; they entirely fail to explain why nowadays such cases are so rarely brought to asylums at all. It is too much to allege that the public generally has yet risen to the high level of modern asylum management in dealing with patients outside, and a change in the prevalent type of insanity seems the only sufficient explanation.

Holloway Sanatorium.—The popularity and usefulness of this institution appear to increase year by year. No fewer than 234 patients were admitted during the twelve months. Numerous structural improvements have been effected or are in progress.

Dr. Philipps has, no doubt inadvertently, fallen into error in stating that the Sanatorium has received more acute cases in the course of the year than any other similar institution. He will find, on referring to the Reports of Bethlem Hospital, that the latter receives many more of this class.

Concerning voluntary boarders, Dr. Philipps says:—

As in previous years, voluntary boarders were freely admitted, with much advantage to many of those received, and some advantage to the institution. It is with regret that I have to notice a growing opposition on the part of the Commissioners in Lunacy to the practice of receiving voluntary boarders. I fail to see what possible objection there can be to a boarder being received into a public hospital, where pecuniary profit is not considered, but only the advantage of the boarder. An inquiry addressed to the Commissioners in Lunacy, whether in their experience they had known any harm result from the reception of boarders into public hospitals, has not as yet been answered. To myself, and to other superintendents of great practical experience, the boarder system seems to be a step in the path of progress. By it careers are saved which would be ruined by certification.

Hull.—Concerning the “medical spirit” in asylums, Dr. Merson says :—

During the last year, as you are probably aware, a medical writer in a popular magazine brought a strong indictment against the present asylum system, arguing that it has utterly failed to accomplish the chief object of its existence, namely, the cure of insanity, and this chiefly from the fact that, owing to the present organization of asylums, the energies of the medical staff are in a great measure wasted in duties not strictly medical. This position appears to have been at once accepted by a certain portion of the public, and hence a movement has arisen for the establishment of hospitals for the treatment of the insane, modelled on the plan of ordinary hospitals. It is argued that, under a system organized on this plan, with increased medical attendance and supervision, and all the appliances of a modern hospital, much more satisfactory results will be obtained than under the present system. While I would be sorry to deny that increased attention to medical details is very desirable, or that valuable results may not be obtained from such a system as that proposed, I may be allowed to say that, in my opinion, those who hold out the prospect of materially increasing the recovery rate of insanity by such means are, however unwittingly, deceiving themselves and misleading the public. The present system, even as a curative agency, has not, in my opinion, been such an absolute failure as the writer alluded to would have us believe; but if it were so, I submit that where it fails is not in the management of the cases submitted to its care, but in the fact that the majority of cases are not brought under its influence till the best time for successful treatment has passed. During the last year considerably more than one half of the cases admitted here were not brought to the asylum until more than three months after the onset of the attack, and I think the same statement will not be far wide of the truth with regard to asylums generally. This shows that in the popular mind there is a sort of stigma attached to the fact of having been an inmate of an asylum, and so long as this feeling exists there will be a strong objection to have recourse to asylum treatment except as a last resort. If this objection can be met by the establishment of mental infirmaries to which patients threatened with insanity might resort without incurring the stigma attaching to residence in an asylum, then no doubt a great step would be gained; but unless we can by some means induce the sufferers to put themselves under treatment at an earlier period, you may establish what hospitals you like, and the result will, I fear, not be much better than under the present system.

Isle of Man.—The death-rate was remarkably low—only 2·2 per cent. on the average number resident.

Limerick.—In this, his last report, Dr. Courtenay refers to a matter which has frequently called for condemnation—the treatment of lunatics as if they were criminals. He says :—

Ten men and two women were transferred from prison by order of the Lord Lieutenant. In no other asylum, so far as I am aware, are so many cases received from gaol; this can only be explained by supposing that in some cases the magistrates prefer to throw the responsibility of certifying to the insanity of the accused person on the medical officer of the prison. In only one case was the crime of which the lunatic was accused of a serious nature. The patient, who, according to his own account, had been insane for many years, and had wandered over the world to escape from his own delusions of persecution, at last sought rest in his native place, married a woman in good circumstances, and appeared to have settled down; but his malady gave him no rest, and without provocation he murdered a farmer in a most brutal manner, who, he supposed, had injured himself and his wife, though he had always been his greatest friend.

Shortly after his trial, his wife, who had lost all her means through her husband's insanity, and was reduced to want, was found drowned in the neighbouring river.

London.—Dr. White again is able to record a very large number of structural and other improvements.

We highly commend the Charts introduced by Dr. White into his report, showing at a glance the rise and fall in admissions, recoveries, deaths, etc. Would that other superintendents would adopt the same admirable plan.

Northampton. St. Andrew's Hospital.—Mr. Bayley reports that during 1889 a large number of patients had to be refused admission, and that, for the second time within a few years, a number of chronic and incurable cases were (on the recommendation of the Commissioners in Lunacy) discharged, and removed to other asylums, to make room for the admission of other patients in whom there was some hope of recovery.

He also records an unusual injury: One accident occurred to a male patient suffering from general paralysis. His thigh bone was fractured while he was being dressed by his attendant. The matter was fully inquired into at the time, and it was reported to the Committee of Management. There was no doubt that it was an accident, and that no violence was used by the attendant. The leg was stiff and bent at the knee, as is often the case with bed-ridden persons, and when the attendant attempted to lift the patient up in a sitting position to dress him the thigh bone snapped from the weight of the body. The patient recovered from the injury, but he died some time after from general paralysis.

To add to the many advantages that patients enjoy in this great hospital, a second seaside house has been leased, and has been used with great benefit.

Norwich.—At last an assistant medical officer has been appointed.

There seems to be no abatement in the determination to carry out such alterations and additions as may add to the efficiency of the asylum. The sanitary arrangements are receiving attention, and they evidently required it, as two attendants developed symptoms of typhoid fever.

Dr. Harris reports that the leave of absence of all nurses has been doubled, and their emoluments and comforts increased. The number of visits made by the night attendants has been lessened, but the reason for this is not given.

Nottingham. Borough.—A new wing for the accommodation of 250 male patients is now in occupation. A chapel and dining-hall have also been provided, and other minor structural improvements have been effected.

Dr. Powell gives the following information relative to the heating, etc., of the new buildings:—

The heating and ventilating of the building are done by a combined system,

which is, as far as I am aware, new in its adaptation to asylums in this country. The following is a brief description of it:—

In the basement are properly constructed trunks which communicate with every room by means of flues of various sizes built in the walls; at the mouth of the main trunk is placed a Blackman fan, which is driven by a small steam engine. The air is admitted through a shaft 30 feet high, placed 50 feet from the building, and propelled by the fan along the trunk at any desired velocity, and enters the room through gratings near the floor, communicating with another series of trunks in the basement, which lead to three lofty towers.

In winter, when it is necessary to warm the air, this is done by steam coils placed in various points in the air trunks, which are capable of being regulated to a nicety, so that any part of the building can be heated or ventilated independently of the other, and the dormitories independently of the day-rooms; this latter is done by means of shutters in the sectional trunks.

So efficiently has the heating been done that a temperature of 60° has been easily maintained throughout the wards without the aid of any fires, and this when the thermometer outside registered 10° of frost. The dormitories and single rooms are just as easily warmed at night.

Those who are intimately acquainted with the working of an asylum will readily imagine the immense comfort of being able to do without fires in the wards. There is no crowding around the fire-places, and no quarrelling for the best seats, but the patients sit scattered about at the windows and at the tables, just as in summer. It was expected that there would be some grumbling at first at the absence of fires, but, strange to say, I don't think I heard a single complaint. Another great advantage this system of heating has over most others is the entire absence from the rooms of all pipes and other heating surfaces.

The ventilation is also equally successful. It is very observable in all the dormitories and single rooms; the air in these appears to be almost as pure in the morning when the patients get up, as in the evening when they go to bed.

Nottingham Lunatic Hospital.—As an indication of the advantages offered by this admirable institution for the treatment of mental diseases, it is gratifying to find the number resident somewhat increased.

Dr. Tate records the case of a lady who was on admission considered hopelessly insane, having been in another asylum for over eight years, suffering from melancholia, but recovered after five years' residence, and is still quite well.

Perth Royal Asylum.—This institution continues to exhibit every sign of successful and enterprising management. In his careful report Dr. Urquhart notices a great variety of topics, *e.g.*, lunacy legislation, medical treatment, etc., etc. He refers to the case of a young man who was admitted in a state of acute mania, of transient form, but extremely violent while it lasted. His sister had been seized with puerperal mania; the mental malady had been communicated to her mother, who in turn communicated it to her son. The derangement happily proved short-lived. The daughter and mother recovered under home treatment, while the son, as above indicated, recovered in the asylum.

Dr. Urquhart makes some judicious remarks on the proposed asylum for curable cases in London, and does not favour the proposal. Wise observations on non-restraint are also made. His

unqualified condemnation of Seclusion as "perversive of proper treatment" is rather sweeping, and we would ask him to continue in his next report the sentence which ends so abruptly with a reference to the subject of relays of attendants. Let him meet the honestly held objections which are made against this latter practice.

A voluntary patient, resident for five years, and believed to be free from all suicidal intent, attempted to take his life whilst suffering from fatal inflammation of the lungs.

Much attention has been devoted to the occupation of the patients, and on an average 58 have been usefully employed. Indeed, there is nothing in our routine life that is more apt to slip behind the requirements of the day. The inert, uninterested listlessness of insane patients has to be combated with vigour and watchfulness. Two new occupations have been introduced for gentlemen—the making of stained-glass screens for windows, and the manufacture of repoussé brasswork. It is extremely difficult to get suitable employment for gentlemen, something of interest, yet not surrounded by too many technical difficulties. Those above-named seemed to present sufficient reward for the labour, without being dully mechanical in their easy artistic processes. A great part of the upholstery work for the new wings is being done by a gentleman who lives alone in the Cottage, where he has his workshop and materials at hand. No less likely workman could well have been found than he when, a few years ago, on account of deeply-seated delusions (which, indeed, he still retains in a modified form), he had to be carried all the way from the asylum to our house at Carnoustie. Now it would be hard to find a more excellent workman or a more easily managed patient.

Sligo District Asylum.—A sensible, practical report, which shows that Dr. Petit continues to improve the asylum under his care.

St. Luke's Hospital.—It is reported that various additions have been made to the furniture and general decorations of the wards, and every effort has been made to compete with the modern requirements of the housing for the insane. We hope to hear before long that clinical instruction is given in this hospital as at Bethlem.

Staffordshire. Burntwood.—The accommodation for lunatics appears to be insufficient, and it has not yet been decided how it is to be provided. A recreation and dining-hall has been provided. The leave of the subordinate staff has been extended, without interfering with work or discipline, and has produced much contentment.

Dr. Spence refers to the training of imbecile children in county asylums. He shows that it would be quite useless to attempt to create a special department in his asylum for this purpose—the material is quite hopeless. Improvable cases have quarters apart from the adult lunatics, are taught good habits as far as possible, and are kept under constant observation, so that should any indications of intellectual brightness manifest themselves, they would be fostered in a proper manner. Two lads are employed in the tailors' shop, one works with the painter, two or three with

the mattress maker, and several have been taught their letters and how to spell simple words. Dr. Spence continues :—

It has been suggested that several counties might combine in order to establish a Home and Training School for weak-minded children ; this is much to be desired, but amalgamations between counties are not readily arrived at, and occasionally such combinations do not appear to work very harmoniously. The authorities of Northamptonshire have recently gone to considerable expense in building an annexe to their county asylum, where they propose to take in at a fixed rate of charge and educate weak-minded children from other counties. As being first in the field, this may prove a successful venture from a financial point of view, but unless they are as careful in the selection of cases for admissions as institutions of a kindred nature are well known to be, one fears that the educational results will not come up to the anticipations of those who are apt to place in the same category children of the mental type usually received here, and *backward* children who form a large proportion of the favourable cases whose improvement—such as it is—is so gratifying a result of the skilled and expensive training they receive.

Staffordshire. Stafford.—A farm of 77 acres has been rented, and it is intended to use part for sewage irrigation. The asylum is considerably overcrowded. Dr. Christie very properly objects to the admission of criminal lunatics to county asylums. He says :—

In three cases this readmission is due to the formality which requires to be gone through in the case of criminal lunatics whose period of sentence has expired, and who are still certified to be insane. These require to be discharged and admitted without leaving the asylum. It has always appeared to me rather a hardship that county asylums should be required to receive such cases, for here they must of course mix and associate with the other inmates, who are mostly respectable people, and who, in the vast majority of instances, are required to be placed under care through no fault of their own. I have known frequent cases of disturbance, attended with violence, arise by these patients being taunted by others as to their previous place of abode.

York Retreat.—A great amount of charitable work continues to be done by this institution. During the year 44 patients received all the advantages of treatment, etc., at the small charge of 10s. per week, and 90 paid less than the average cost of maintenance.

The report contains a view and ground plan of a villa erected for the prompt treatment of acute cases (females) of insanity. The arrangements are also described in detail by Dr. Baker, and we can conscientiously commend them strongly. Other structural improvements have been effected in the older buildings.

A portrait of William Tuke, who projected the Retreat in 1792, executed by his great-great-grandson, Henry S. Tuke, has been presented to the institution by Dr. Hack Tuke.

(To be Continued.)

2. French and Belgian Retrospect.

By D. HACK TUKE, F.R.C.P.

De la Législation Comparée sur le Placement des Aliénés, dans les Etablissements Publics et Privés. Par M. B. BALL et M. A. ROUILLARD. Paris. Goupy et Jourdan, 1889.

Want of space has prevented us taking notice of this publication in a previous number. It consists of a report presented to the International Congress of Mental Medicine held in Paris last year. Anything written by Professor Ball is worth reading. The present publication is no exception. It does not admit of analysis or quotation, and those who want a brief description of the provision made for the insane, as the result of special legislation in the principal countries in Europe and the States, should read it. It is pointed out as a grave mistake in many countries that under the same government the most contradictory laws and regulations are in force to provide for the insane. It is so in England, in Switzerland, and in America. To the Frenchman it seems that the unification of the lunacy laws is an absolute necessity. The writer insists on the duty of the State to legislate for dipsomaniacs, morphino-maniacs, etc. The question of legislation for criminals is intentionally omitted on account of its magnitude. As is justly observed, the whole report would have to be devoted to it.

Du Délire des Persécutions ou Maladie de Lasègue. Par M. B. BALL.

To render justice to Lasègue is one of the objects of Prof. Ball in his "Treatise on the Insanity of Persecution," and to few clinical physicians is more merit due than to him. On everything he wrote and spoke he impressed the stamp of his genius. This mania was first described by Kant; Pinel and Esquirol reported cases illustrating it; but Lasègue went further, and created, so to speak, a special form of mental disease under the name of *délire des persécutions*. The progress of psychological medicine has, however, advanced still further by distinguishing various types of the malady. There is that described by Lasègue, comprising the genuine victim of imaginary persecution; then there is the type described by Morel, Foville, and Falret, in which ambitious ideas are associated with it. A third is characterized not only by the delusion in question, but by a persecuting mania, and has been described by Falret as well as Lasègue. Fourthly, ideas of persecution arise in the course of other insanities, in general paralysis, alcoholics, etc. Fifthly, *folie à deux* is usually one form of the insanity of persecution. Lastly, we have those who consider

themselves persecuted, but are not in a condition in which they are placed under restraint.

In regard to the last division, it may seem unnecessary to distinguish those who are in from those who are out of asylums; but it is very important to recognize the presence of this class in our midst. Such persons sometimes cause great excitement by their sudden commission of crime; or their eccentricities at least require that they should be placed in confinement. They may, however, remain at large, and by their unjust wills they may cause more unhappiness after death than they did during their lives.

In regard to "the persecuted" who are ambitious, we have in these lectures a good description of *mégalo-manie*. It is very easy to trace the logical connection between that condition of mind, in which the patient believes himself to be an exalted personage, and the delusion of being the victim of studied neglect and subsequently actual persecution. Ball gives the case of a woman who presented herself before the commissary of police to recover a fortune of which she had been deprived. She complained of persecutions, and had hallucinations of hearing, taste, and smell. She believed herself to be a queen, but a conspiracy in her own body prevented her from reigning.

In the asylum the *déire des grandeurs* was the predominant symptom—in short, the exaltation of the ego. She presented absolutely no physical signs of general paralysis; the articulation perfectly clear, although speaking rapidly. Her ideas of grandeur have none of the usual characters met with in general paralytics; no talk about millions or milliards; no childish ideas, and especially none of those lapses by which such patients from time to time pass out of their usual condition to fall into ridiculous contradictions. This patient is a true *ambitieuse*. She never gives up her pretensions, and always maintains her proud attitude.

Foville's article upon grandiose delusions is referred to as supporting Morel, who first established the association of these ideas with the insanity of persecution.

Dr. Ball ably contrasts the mental condition of the alcoholic insane with those who imagine that they are persecuted. The latter is almost always in good physical health, while the former is more or less out of health. His intelligence may be good enough, but one cannot eulogize his liver or stomach. The one sleeps and digests his food badly, the other well. The insanity of the one is essentially subjective, that of the alcoholic is frequently objective, and is powerfully influenced by external circumstances, which constantly modify his mental disorder. The insanity of the alcoholic is a dream, that of the persecuted is a perpetual debate, an incessant abuse of argument and logic. Consequently the one is impulsive, and he easily passes from the idea to the overt act. The other, on the contrary, considers his blows, and only manifests his aggressive tendencies after long premeditation; his acts

of violence are never spontaneous, his memory is remarkably good, while the alcoholic loses his.

There are many other remarkable points of contrast; but we cannot pursue this and other ably-treated subjects in these lectures. Suffice it to say that the latter are characterized by the same skilful treatment and graceful style which habitually mark the writings and discourses of the eminent professor of insanity in the Paris Faculty of Medicine.

Des Hallucinations de l'ouïe. Par le Dr. G. DESCOURTIS. (*Prix Civrieux.*) Paris, 1889.

This *mémoire* was "crowned" by the Academy of Medicine of Paris, and with good reason.

The author does not recognize the force of the distinction usually made between hallucination and illusion, and in this respect agrees with Prof. Ball. No doubt the distinction is a very fine one in some instances. The question is not altogether unimportant, because while men easily, in even a perfectly sane state, convert a real object into something other than itself, they rarely perceive one externally projected in the entire absence of a corresponding reality, without a more or less grave disturbance of the nervous system. It is maintained that an illusion is always a false interpretation—and therefore a purely psychical process—not an illusion of the senses at all. The great point is to define clearly; if this be done, there would be less difference of opinion on the question among psychologists. It must not be forgotten that an insane hallucination as well as an illusion may involve a false interpretation.

Some interesting cases are reported illustrative of hallucination. Evidence is afforded that the excitation of one sense may increase and even create the functional activity of another. The experience of the author affords an example. One day he was seated at his desk when a door was shut in the storey below, making a great noise. He at once perceived a smell, which originated at the other end of the room. A quarter of an hour afterwards a carriage passed under his window, making a loud sound, and the same odour returned. After the noise had gone the smell disappeared also. The remarkable phenomena of colour-bearing are noted. With some musicians different notes have their corresponding colours. We are glad to see a section devoted to the action of cerebral automatism in causing auditory hallucination. There is an interesting section on the hallucinations of hearing observed in dreams. They are rarer than those of sight. When they do occur they are associated with the personages seen in dreams, and are not isolated. Automatic action of the cerebrum, combined with the reflection of the customary occupations of the individual, cause doubling of the personality in dreams. The various mental dis-

orders in which hallucinations arise are enumerated. The ætiology, pathology, diagnosis, prognosis, and treatment of hallucinations are severally discussed. M. Descourtis is in accord with Prof. Ball in holding that the *point de départ* of all hallucinations is sensorial. Granting this, the elements which give force and clothing to an hallucination are treasured up in the store-house of the memory, and drawn thence by the mind. We cannot do more than give this scanty notice of a treatise which, although not extending beyond 110 pages, contains a large amount of most interesting and original matter. It is a valuable contribution to the literature, already so vast, of this fascinating subject.

Des Prisons Asiles pour Criminels Aliénés et Instinctifs. Par le Dr. SEMAL. Bruxelles, 1889.

Le Médecine Nutritive en Psychiatrie. Par le Dr. SEMAL. Bruxelles, 1889.

De l'utilité et des dangers de l'Hypnotisme. Idem, 1888.

Numerous as are the articles which appear from the fertile brain of Dr. Semal, he is in no danger of overwriting himself or wearying his readers. Various conclusions are postulated by the author in the brochure placed first in the above list, and to them we would refer our readers. We may, however, say that Dr. Semal concludes his article by asking whether it is too much to require from society at the present day to place its repressive legislation in accord with the indisputable acquisitions of science in promulgating the truth that between the crime which it has the right to punish, and the malady which it is bound to treat, there is a middle course, namely, that of a simple armed neutrality. To this question he has no hesitation in replying that it is not.

"Individualization" instead of arbitrary generalization is the means which has succeeded in advancing all the sciences; and why, he asks, does the law refuse to employ it here?

"To-day it is necessary to take account of the social elements, whose advance the contempt of human life, the caprice of rulers, and violent contentions have suppressed. Not only would capital punishment disappear from our codes, but expiation and intimidation are the old arms whose rust becomes every day thicker, and it is the adaptation to society which one aims at, even through punishment itself—a result only possible when we make allowance for individual tendencies" (p. 57).

Nutritive Medicine in Psychiatry is, all will admit, an important subject. The writer points out the necessity of introducing a dietary sufficiently nourishing on the one hand, and, on the other, one of a special kind for all those patients who display a marked defect of nutrition, whatever may be the train of nervous or

mental disorder which accompany malnutrition. He adds that the first of these indications is scarcely fulfilled in the asylum at Mons. Tables are given which indicate the amount of different kinds of food now ordered by the superintendent. A mortality table is appended, showing that during the decade, 1867-75, the ratio of deaths to the number resident was 8·4, while during that of 1876-88 it was 6·6. Dr. Semal asserts that the curability of insanity will be increased by giving rather fewer narcotics, and rather more food. It is noteworthy that he has to protest against the mischievous doctrines of Broussais, because medical practitioners are met with every day who continue to bleed and to purge when they treat the slightest mental derangement, and pour in bromide of potassium on the occasion of the slightest excitement, while none of them ever dream of including good food in the system of cure. It is needless to say that for many years English alienists have protested against starvation or depressants in the treatment of the insane.

In the third publication Dr. Semal treats the subject of Hypnotism in the judicious and discriminative way which might be expected from him. He is no opponent of the legitimate employment of Hypnotism, but is very properly alive to the dangers of its abuse.

La Folie au point de vue Judiciaire et Administratif. Par Dr. J. P. HENRY COUTAGNE. Paris: G. Steinheil, 1889.

The author in the first chapter divides the history of insanity into four periods, that of antiquity, the middle ages, the modern period, and the contemporary age.

In the first, which terminates in the triumph of Christianity, he surveys the theological, philosophical and medical conceptions of insanity in the East, especially among the chosen Greeks; also Roman jurisprudence—the origin of French law.

The middle age begins with the overthrow of the Roman world by the barbarians. The emancipation of thought in the fifteenth century may inaugurate modern history in general, but this cannot be regarded as true of the rational treatment of insanity, which only commenced during the eighteenth century.

Modern history really commences as regards the insane with philanthropists and philosophers. The idea of demoniacal possession faded away, and benevolent and scientific thought led to the improved treatment of the lunatic. In France, the influence of Pinel marks the change of feeling. The contemporary period may be regarded as beginning with the great Lunacy Law of 1838. Dr. Coutagne does not appear to sympathize with the agitation which has led to the attempt to revise this famous statute.

We do not propose to follow the author in his historical sketch,

but may remark that he does justice to the attempt in England to reform the treatment of the insane, which was contemporary with that which took place in France. We pass on to the last two chapters, in which he studies insanity in codes of law. The terms in which the articles of the Penal Code 64, and of the Civil (489, 499, 901) are as follows :—

“Penal Code, article 64: “There is neither crime nor misdemeanor when the accused was in a state of dementia at the time the act was committed, or if overpowered by a force which he could not resist.”

Civil Code, article 489: “A person who has attained his majority, and is in a state of habitual imbecility, or dementia, or mania, must be placed under control, even when this condition has certain lucid intervals.”

Civil Code, article 499: “When the request for interdiction is rejected, the tribunal can, nevertheless, if the circumstances demand it, order that the defendant shall not henceforward plead, compound, borrow, receive personal property, nor give a discharge for it, nor alienate, nor incumber his mortgages, without the help of counsel, who shall be provided for him by the same judgment.”

Civil Code, article 901: “In order to render a donation while living or a will valid, it is necessary to be of sound mind.”

Article 174 of the Civil Code enacts that “The state of dementia of the future husband or wife is a reason for opposing marriage.”

The influence of Greece and Rome is marked in these articles. The *furiosus*, the *demens*, the *stultus*, or *fatuus* have been translated into French and connote states of “fureur,” “démence,” “imbécillité” (p. 116). The first term may be made to include all that falls under mania. Démence designates the most varied forms of mental disorder, although in medical psychology it is limited to the terminal stage of cerebral diseases marked by hopeless decay of the faculties. Imbécillité, although in medicine restricted to idiocy, properly so-called, is employed to indicate all annihilation of the mental faculties originating in birth or infancy.

The author avoids the burning question of the competency of the lawyer and physician in the examination of the insane, and prefers to state the elements of a procedure of which the solution will not be so long pending as one might be tempted to believe, and leaves its reader the task of drawing his conclusion *in petto*. The lawyer examines the lunatic according to such superficial ideas that you feel the absolute necessity of knowing the scientific basis upon which alone this diagnosis securely stands.

It would occupy too much of our space to follow Dr. Coutagne in the practical suggestions which he gives in regard to the different forms of mental disorder which present themselves to the expert consulted in criminal and civil cases, with a view to

determine the all-important question of responsibility. Very properly he resents the sweeping assertion that the criminal is a moral lunatic.

Remarking on the delicate task of making not only a present, but a retrospective diagnosis, the author observes that the latter is required under various characteristic circumstances. Thus, in transitory forms of insanity, we have alcoholism with acute and sub-acute derangements, the cause of innumerable legal actions; but it leaves on the organism a permanent impression which forms an important means for guiding the expert. Epilepsy, again, causes temporary attacks, terminating in dangerous impulses. Further, in civil law the retrospective diagnosis of insanity becomes especially necessary in considering testamentary capacity. To the study of the documents written by the testator, Dr. Coutagne adds that of the autopsy.

Les Régicides dans l'Histoire et dans le Présent. Par le Dr. EMMANUEL RÉGIS. With portraits. Paris: G. Masson, Editeur, 1890.

It is somewhat remarkable that no publication bearing the above title should have appeared previously. This brochure of about 100 pages constitutes a psychological study written by a mental physician well qualified to do justice to it. It should be stated that the term "regicides" includes all fanatics who have assassinated, or who have attempted assassination, not only a monarch, but anyone in power for the time being. The illustrations, fac-similes of original likenesses, add much to the interest and value of the *mémoire*. The author divides this class of criminals into true and false, the former being those who have made the assault in direct consequence of a particular mental condition, while the latter are those who have committed the act by accident without any immediate connection with the ideas present in their minds, whether delusions or otherwise. Ravailiac, who assassinated Henri IV., is an example of the first class, and Mariotti, who shot at the head of the French Government (Monsieur de Freycinet) simply to direct attention to himself, and so obtain justice for his imaginary grievances, an example of the second. Dodwell, who shot at the Master of the Rolls, would probably be another. In a word, with one class regicide is the object, and with the other class only the means to an end.

As M. Régis well remarks, the first thing that strikes one is that they are neither absolutely sane nor absolutely mad. For the most part they labour under an insane inheritance. Very often there is an excess of moral sensibility combined with marked anæsthesia and analgesia, impulsive tendencies of the class belonging to obsession; and a want of balance, there being more or less brilliant intellectual powers, but abnormal tendencies, coupled with the inability to resist temptation. The history of the childhood and early manhood of regicides reveals unhealthy mental

characteristics. With rare exceptions they have been under 30 years of age and some only 20. Charlotte Corday was only 25. Her father, who, when a youth, made Plutarch, Raynal, and Rousseau his favourite authors, had, although an aristocrat, embraced the doctrines of the revolution. The author does not hesitate to place Guiteau among the insane assassins of the religious and politico-mystical type.

A few words on the medico-legal aspect of this subject. What ought to be done with regicides? In past times they were dreadfully punished. Mercy has in our day largely tempered the punishment which the law authorizes. Napoleon, after an attempt was made upon his life by Staaps, observed, "You see that he is an unhappy being labouring under insanity or imbecility." His military officers, however, strongly insisted upon making an example of him. Instances are given of regicides who have terminated their own lives in a state of insanity. M. Régis does not allow that the idea of making an example is of the first importance. Execution has never arrested the hand of a regicide. On the contrary, the glory of martyrdom is attractive. Science leads us to come to a judgment, not from a consideration of the crime, but of the criminal. Science teaches us that regicides are ill-balanced beings or are the outcome of heredity. They have a mystical temperament, aggravated by a political or religious craze and complicated sometimes with hallucinations. At first they believe themselves called to the double rôle of reformers and martyrs. Under the influence of an obsession, which they cannot resist, they strike a blow at those who are in power, in the name of God and country. When the regicide is undoubtedly the subject of mental disease, he ought to be placed in an asylum. Such treatment breaks his pride, because he considers it a shame that he, a hero and martyr, should be treated as a lunatic. Those who cry out for an "example" ought to be satisfied with this. As to the other class, who have been called by Laschi, "regicides by passion," and who are in reality mentally disordered, however slightly, there is a special reason for restraint.

They are individuals who might suddenly be dangerous to society and who ought to be placed as long as is necessary in an asylum for insane criminals, similar to Broadmoor.

Such are the opinions of M. Régis. We have said enough to induce the reader to obtain for himself the modest but useful production, which we have so briefly reviewed.

Épilepsie; Folie Épileptique. Par le Dr. JULES CHRISTIAN. Paris: G. Masson, 1890.

This work was "crowned" by the Royal Academy of Medicine, of Belgium. In a former number we reviewed a *mémoire* written by the same well-known alienist, Dr. Jules Christian, the physician of Charenton. The subject is treated in a methodical manner, and

it would be difficult to find so systematic a treatise on epilepsy within the compass of 160 pages. We turn to the section treating of the all-important form of the disorder, which has obtained the name of *épilepsie larvée*. Morel was the one to affirm this epileptic insanity presents a distinctive character, and to maintain that it is not only ordinary epilepsy complicated with a fresh element—mental disorder—but that it is the same neurosis transformed; that the insanity may replace the convulsion, and when this is the case, the symptoms form a definite group which ought to be clearly recognized. This group comprised all the mental phenomena which had for so long been variously interpreted, namely, furious mania, instantaneous outbreaks, mania transitoria, periodical insanity, and even mental stupor and homicidal mania. This was in 1860. The doctrine was supported by J. Falret, who declared that the convulsive and intellectual symptoms of epileptics were equivalent. He described the *petit mal* and *grand mal* of the mental attacks as corresponding to those of the convulsive disorder. Several questions remain for consideration, such as whether the epilepsy must be always regarded as the cause of the mental symptoms which arise in its course, or are they merely accidental? With epilepsy mental disorders may occur, having quite a different origin, such as alcohol. Doubtless there is no reason why the patient who suffers from epilepsy should not have an attack of melancholia quite independently of his epilepsy. It is, therefore, necessary to distinguish, in each case of insanity associated with epilepsy, between the accidental and the causal attacks of insanity. Epileptic insanity almost always breaks out suddenly and reaches its climax at once. In an attack of ordinary mania, on the other hand, the period of excitement is preceded in the majority of instances by mental depression. The epileptic power suddenly ceases, whereas an attack of mania only gradually subsides. The brain of the epileptic acts automatically and the patient forgets what has happened. Hallucination is almost always present, and usually it is of a frightful character. This leads oftener than impulse to the violent acts which epileptics are so prone to commit. Dr. Christian, so far back as 1878, criticized Morel's doctrine of masked epilepsy and especially the exaggerated form in which Legrand du Saulle and others have presented it. It is desirable to give Morel's definition in his own words, written in 1869: "I call *épilepsie larvée* a variety of epilepsy which is not manifested by the attacks, by vertigo or convulsions properly so-called, but rather, on the contrary, by all the other symptoms which accompany ordinary epilepsy with the *ictus apoplectique* and convulsions, that is to say periodical alternations of excitement and depression, manifestations sudden in character, of fury, without a determining motive, or one utterly trivial."

Certain sensory phenomena appear, which are observed in ordinary epilepsy; thus the patient thinks himself plunged into a

dazzling light, and brilliant globes of fire are seen. Some patients develop true hallucinations of hearing. It is, indeed, astonishing to find to how many different morbid conditions the term has been applied. Again, in some cases, epileptic convulsions and the mental disorder alternate in the same patient. On the whole the author regards it as entirely unproved that a form of insanity exists which justifies the appellation of "epileptic." In order to establish satisfactorily the nature of epileptic insanity there is only one certain sign, namely, the presence of concomitant epileptic symptoms (accidents). It is admitted that there is only one test of epilepsy being present, and that is the convulsive seizure, although the advocates of the doctrine of masked epilepsy try to demonstrate that it exists *per se*, that it has its own peculiar symptoms, and that it is not in any respect misunderstood epilepsy. Thus Morel himself, in attempting to diagnose between epileptic, hysteric, and hypochondriacal insanity, cannot help declaring that epileptic insanity is always preceded or followed by convulsive attacks (p. 127).

Dr. Christian does not adopt the theories of Hughlings Jackson. He, however, refers to Jacksonian epilepsy, and observes that its true nature was declared in 1827 by Bravais, and, therefore, ought not to be called by the former name. It is due to Dr. Jackson to state that, in his Lumleian Lectures recently delivered before the College of Physicians, he gives credit to the French physician and assigns the earlier date of 1824.

As the author retains his faith in the older theories of the pathology of epilepsy, it would be extremely interesting to have, from so acute an observer and so able a writer, his reasons for doing so in preference to adopting the Jacksonian doctrines. Our pages would always be at his disposal for an article written from his own standpoint.

Bulletins de la Société de Psychologie Physiologique. Paris. 1890.

This journal is now in its fifth year and continues to supply interesting and remarkable articles.

Bulletins de la Société de Médecine Mentale de Belgique. Gand.

This journal is highly creditable to the energy and ability of its editor and the Belgian School of Mental Medicine.

Le Progrès Médical. Paris.

A series of articles on Non-Restraint as practised in England have recently appeared, which we shall notice in a future number.

3. *Criminal Anthropology.*

By HAVELOCK ELLIS, L.S.A., etc.

Cesare Lombroso : *L'Uomo Delinquente*. Volume Secundo. Torino : Bocca, 1889.

L'Anthropologie Criminelle et ses Récents Progrès. ("Bibliothèque de Philosophie Contemporaine"). Par Cesare Lombroso. Paris : Alcan, 1890.

Étude Anthropométrique sur les Prostituées et les Voleuses. Par le Docteur Pauline Tarnowsky. (Publication du *Progrès Médical*). Paris, 1889.

After an interval of thirteen years, Prof. Lombroso has at length published the second (but not the last) volume of his great work on the criminal man. In the meanwhile the first volume has passed through several editions, adding so considerably to its size that a portion is now thrown into this second volume. At the same time, owing partly to the subject of the book, partly to the originality and audacity of its conclusions, "*L'Uomo Delinquente*" has gained for its author a wider reputation than has ever before fallen to an investigator into morbid psychology. It has been translated into the chief European languages; an English translation is at length about to appear in America, and it has everywhere given rise to controversy.

The second volume is far from possessing the somewhat sensational interest of the first, nor has it the same unity. The latter dealt exclusively with what Lombroso calls the "congenital criminal," and his nature and genesis. This "congenital criminal" was regarded (especially in the early editions of the book) as chiefly the product of atavism, as a savage born in a civilized race. The second volume deals with various other varieties of the criminal, for whom no such startling claim is put forward, and, while full of instruction or suggestion, it is, therefore, less likely to excite popular interest or fierce controversy. The volume, which extends to nearly 600 pages, and is illustrated by many portraits, maps, and diagrams, deals with the epileptic criminal, the criminal by passion, the insane criminal (including the alcoholic criminal, the hysterical criminal, and the "mattoid" criminal), and the occasional criminal, under which head are included several minor varieties. There are various appendices on minute points of criminal anthropology, the work of Marro, Tamburini, Gradenigo, Ottolenghi, etc.

The first part of the volume—that dealing with the epileptic criminal—has already appeared in part in some earlier editions of the first volume. In its completed form, however, it occupies very appropriately the first place in the present volume, for it indicates the direction in which Lombroso's conception of the

criminal has developed since he published the earlier editions of the first volume of "L'Uomo Delinquente." There he had sought to show that there is a certain congenital variety of criminal, very distinct, though not commonly found, the product of atavism. He further endeavoured to prove that the congenital criminal is one with the already widely-recognized morally insane person. At the very outset of this new volume he remarks, in reference to both the morally insane and the congenitally criminal: "In the large field of epilepsy both the one and the other unite, and are mingled in the same great natural family." A great family it certainly is, if these and some other groups described in this volume are to fall into it, and very few investigators have as yet followed Lombroso in his elastic use of the term "epilepsy," for by "epilepsy," it must be clearly realized, Lombroso means not merely the *haut mal*, or even the *petit mal*, but the *ensemble* of those secondary characters which he has already found in the morally insane and the congenitally criminal, which he finds in still more marked form in the epileptic, and by the help of which he now constitutes what he calls the epileptic type. Lombroso proceeds, therefore, as in his first volume, when dealing with the congenital criminal, to give the results of his own and other investigations into the biology, psychology, anthropometry, etc., of the epileptic, *i.e.*, his degenerative anomalies, physiognomy, sensibility, left-handedness, condition of reflexes, disvulnerability, somnambulism, religiosity, vanity, and so forth; the observations collected under these heads being of very various degrees of value, but frequently interesting or suggestive. The conclusion arrived at is that the epileptic presents the same characters as the congenital or instinctive criminal, but in an exaggerated form; and also that, in the words of Voisin, "the division of epileptics into sane and insane is a sophism without practical foundation." After studying minutely certain cases of epileptic criminals, especially that of Misdrea, Lombroso adds: "In these cases the psychic epileptic access was a continuation of the previous malevolent tendencies, with premeditation and complete, or almost complete, recollection; there was nothing to distinguish it from a criminal act. Observe, also, that this apparently reasonable state may last for days, even months. And then, I would add, what difficulty is there in declaring this state analogous to that which congenital criminals present during the whole of their lives, if, to admit it, we have only to prolong a little farther the line of epilepsy?" (p. 67). At the same time, he reaches the conclusion that moral insanity is a kind of *épilepsie larvée*, a chronic *épilepsie larvée*. The epileptic criminal merely presents the exaggeration of moral insanity. The congenital criminal, and the morally insane person, are special forms, or variants, of the epileptic; they reveal what Griesinger would have called epileptoid states, of which the other forms of criminality give us paler representations.

In the second part the criminal by impetus or passion is studied; and it contains also a chapter on suicides by passion. A number of physical, psychical, and statistical peculiarities of such criminals and their deeds are pointed out, in accordance with Lombroso's usual method, and he insists on the state of unconsciousness, analogous with the epileptic state, in which such crimes are sometimes committed.

The third and largest part of the book is occupied with the insane criminal and his varieties. It is perhaps the most interesting section of the book, and brings together a very large and somewhat miscellaneous collection of facts, which are not very easy to classify or summarize. The first chapter deals with statistics, the second with biology (physiognomy, cranial anomalies, anomalies of sensibility, heredity, etc.), the third with the psychological analogies between insane criminals and congenital criminals, the fourth with the psychological varieties of criminal insanity, the fifth with the alcoholic criminal, the sixth with the hysterical criminal, the seventh with the "mattoid" criminal.

Throughout these many-sided discussions, Lombroso constantly brings us back to his conception of epilepsy as the basis of all these various neuroses. Thus "the attack of *delirium tremens*, the alcoholic *raptus*, are varieties of epilepsy, even physiologically and etiologically, since they are the effect of a cortical irritation of intoxication." He quotes the statistics as to the large proportion (51 per cent., according to Bourneville) of epileptics of alcoholic parentage, and finds the same psychological peculiarities in epileptics and inebriates. Again, in concluding his study of the hysterical delinquent, Lombroso emphasizes the analogies between hysteria and epilepsy; many of the degenerative characters of the epileptic being absent, but the sensory obtuseness and other functional characters more marked; in both intermittence and masked forms in which the disorder reveals itself by similar malevolent and vicious tendencies; the same etiological relationship in both.

The next chapter is devoted to the not very large class of semi-insane persons, whom Lombroso designates *mattoidi*. The "mattoids" are related to idiots on one side, and to monomaniacs on the other, but they have well marked characters of their own. They are rarely women; Lombroso only knows two, one of them being Louise Michel. They are rarely youthful; again, only two exceptions. They are usually found in large cities, and to some extent in mountainous districts where *goître* and cretinism are prevalent; they are frequent in the cities in which insanity is also frequent, as Verona; they abound also in countries in which a new and artificial civilization has been rapidly introduced, as in India. They are frequently clerks, doctors, or priests, rarely soldiers or country people. They often display notable ability in practical life, but they show, also, an exaggerated laboriousness in matters external to their profession, and out of proportion to their not

very elevated intelligence—a laboriousness like that of genius, without showing any corresponding results. Their altruism is often very highly developed, and they publish a great number of books of no value. This *cacoethes scribendi* Lombroso seems to regard as frequently their chief characteristic; and while they are often marked by perfect good sense in daily life, their books may be of a very insane character. They possess also a very exaggerated belief in their own merits, which comes out more in their books than in their daily life. The “mattoid” attaches himself to all that is new; “every new sect, every new science has some mattoid among its followers.” He appears to be by no means unlike what the Americans call a “crank;” and Lombroso selects an American, Guiteau—lawyer, journalist, preacher, *impresario*, writer of strange books and theological journals, moral imbecile, political assassin—as the complete type of a variety of “mattoid,” exhibiting lack of moral sense instead of marked altruism.

The fourth part of the volume is devoted to the occasional criminal, that is to say, the criminal who differs little from ordinary persons, and who is driven to crime more by external circumstances than by inbred instincts. Lombroso divides occasional criminals into pseudo-criminals and criminaloids. The former consist of (1) persons who commit crimes involuntarily, and are, therefore, in no sense criminals; and (2) those who without perversity commit some act against Government, religion, etc., which the dominant public opinion regards as crime. The criminaloid corresponds to the real occasional criminal, the weak-charactered person who is made a criminal by opportunity, and who presents none of the anatomical peculiarities of the criminal; imitation, commercial occupations, and the prison play a considerable part in his fate. A chapter is given to a special variety of delinquent whom Lombroso calls the latent criminal: “Just as we have the criminal by occasion, so we have the congenital criminal who does not manifest himself as such because the occasion is wanting, because wealth or power gives him the opportunity of satisfying his depraved instincts without violating the law. I have known three such persons with all the physical and psychical characters of the congenital criminal, but whose high social position preserved them from the prison.” In the brief concluding chapter Lombroso again repeats how in every form of criminal perversity studied in this volume it is possible to find “an epileptoid substratum, upon which, it is evident, together with atavism, is founded and evolved nearly the whole of the melancholy criminal world.”

We find throughout this volume the same absence of keen critical discernment and well-weighed conclusions which impairs the value of nearly all Lombroso’s previous works; but, at the same time, it shows also the same qualities of suggestiveness and genial exuberance of ideas which have made him an initiator and

a leader in the exact study of so many obscure paths of morbid psychology. The defects of his work are too obvious to lead astray any intelligent and critical reader, while its suggestive qualities serve to stimulate more patient and careful investigators.

In "L'Anthropologie Criminelle et ses Récents Progrès" Lombroso, writing in French, summarizes some of the recent results of "the rapid, almost precipitous progress" of criminal anthropology, dedicating his book to Brouardel, Motet, and Roussel, "the apostles of criminal anthropology in France," a title which all three gentlemen will no doubt modestly decline. There is little that is original in the book; it consists chiefly of summaries of papers read at the last Congress of Criminal Anthropology, and of articles published in the "Archivo di Psichiatria," the "Revue Philosophique," and other Italian, French, Russian, etc., reviews, largely as the result of Lombroso's inspiration. The subjects dealt with are morphological anomalies in criminals (brain, skull, etc.), the functions of criminals (secrections, taste, smell, etc.), with chapters on epilepsy, criminals in prison, political crime, the necessity of instruction in criminal anthropology, etc. The whole is slight and disconnected, and will be of little value to any reader to whom the subject is new; but to those who possess some more comprehensive work on criminal anthropology, and who wish to know something of what has been done during the last two or three years in the not very accessible reviews devoted to that science, the book will be of distinct interest. It is worthy of note that in this, his latest utterance on the subject, Prof. Lombroso adheres to his position in regard to epilepsy, perhaps even still more emphatically. Referring to the observations of Féré on the increased arterial pressure during the epileptic paroxysms and the similar increase in non-epileptic individuals during fits of anger, he remarks: "These observations, which bring in evidence the similarity of the physiological phenomena which accompany emotional discharges and convulsive discharges, show that there is no fundamental distinction to establish; this is also shown by Venturi in his studies on what he calls the epileptic temperament, extreme and excessive in all things. One sees thus that the slightly violent movements, blushing, tears, etc., of persons in a normal condition correspond to the convulsions, hallucinations, fury, congestion, and delirium of the epileptic. It is only a question of degree."

Dr. Pauline Tarnowsky, the sister of the well-known alienist of the same name, has given us in an interesting and instructive volume the results of four years' work in criminal anthropology in Russia. When she set out on this series of investigations it was as a beginner. Her methods are not always above criticism. In the large body of figures which she presents to us, the extremely large proportion ending in 0 or 5, shows that sufficient exactness

has not been attained; and she herself confesses that the results are less definite than she had hoped for at the outset. The subject is, however, so new—only a few very fragmentary and imperfect observations having appeared hitherto—and Dr. Pauline Tarnowsky's study is in many ways so thorough and excellent, that it will at the least do very much to clear the way for subsequent investigators.

The authoress starts from the standpoint of Morel's fruitful conception of the hereditary character of degeneration. She observes that there are a large proportion of prostitutes who delight in a method of life which is in startling contrast to the lives of ordinary women, a life which involves a sexual abnegation not even usually found among animals; and that when removed from this life they will return to it of free-will. The question she set herself was this: "When a woman presents so notable a difference in moral respects, will she not also show physical deviations distinguishing her from healthy and normal women?"

The investigations were made on 150 registered prostitutes who had lived for at least three years, and usually much longer, in a *maison de tolerance*, and who had entered the great Kalinkine hospital; on 100 recidivist women thieves in prison; and, for purposes of control, on 100 peasant women of the same race and from the same provinces; and on 50 educated women undergoing higher education at St. Petersburg, these latter being chosen among those who had had several generations of educated ancestors. Care was taken to exclude all persons who were not Great Russians by both parents; there were thus no Little Russians, Ukrainians, etc. The prostitutes selected formed, as Dr. Tarnowsky expresses it, "the kernel of prostitution;" they were, as it were, prostitutes by nature, who were pleased with their occupation and had no desire to change it. None were included who had become prostitutes by accident and who wished to escape. The examination bore on the measurements of head and face, chest, hips, height, weight, etc. At the same time, as much information as possible was obtained regarding the childhood of the subjects, their environment, etc.

The signs of degeneration, both of a physical and psychical character, were very numerous and well marked among the prostitutes. The heads were somewhat smaller and the faces somewhat larger than among the peasant women—a well-recognized sign of low type. Cranial anomalies were found among 41·33 per cent.; facial anomalies among 42·66 per cent.; abnormalities of the ears among 42 per cent.; of the teeth among 54 per cent. A very pronounced occipital protuberance was found to be common; so also the *camus* type of nose, *i.e.*, with deep excavation at root. An investigation into the hereditary influences at work on these subjects showed an alcoholic parentage in 82·66 per cent.; phthisical

parentage in 44 per. cent.; epileptic in six per. cent.; insane in three per cent.; in four per cent. the signs of hereditary syphilis were found.

On the psychical side, Dr. Tarnowsky divides these subjects into four classes, which she describes very vividly, giving illustrative cases and photographs. The first is the *obtuse* class. Their heredity is very bad, and signs of degeneration frequent. They are often large women, frequently of lymphatic temperament, "wallowing in immobility;" they are usually found among the lower classes of prostitutes, and they drink much. The *careless* (*insouciant*) class form a complete contrast to the first. Their heredity is not so bad (except in regard to alcoholism), and they show fewer signs of physical degeneration; they are volatile, talkative, very frank, and always in tears or laughter; they drink to great excess, and are more commonly found among the better sort of prostitutes. The next class is the *hysterical*. It is not very homogeneous, and includes various minor varieties—sentimental, rowdy, sly, and lascivious; the hereditary influences are frequently phthisical. The last class is the *immodest* (*impudique*). Here also a phthisical heredity is frequently found; those who belong to this class are egotistical and dishonest, their chief characteristic being a moral blindness, to which the author applies the English term, "moral insanity." At the same time, they are very feminine, coquettish, and attractive, bestowing great care on their persons and dress.

The thieves, although presenting many signs of physical and psychical degeneration, were in both respects distinctly less abnormal than the prostitutes. The heredity is better; they do not display to nearly the same extent the sterility which is so extremely marked among prostitutes; they have more *amour-propre*, more reserve, and less fear of work than prostitutes.

It will be seen that the results of Dr. Pauline Tarnowsky's interesting investigations lead her to range herself among those who find in prostitution an explanation of the apparent anomaly of the minor criminality of women compared to men; that is to say, that by prostitution women attain the same ends as men attain by crime, and that prostitutes, even more than women criminals, display those signs of physical and psychical degeneration which are found in men criminals.

4. *German Retrospect.*

By WILLIAM W. IRELAND, M.D.

The first two numbers of the Monthly International "Centralblatt für Nervenheilkunde u. Psychiatrie" have appeared. It is edited by Dr. Albrecht Erlenmeyer (Bendorf), of whose recently defunct journal it is an enlargement, Charcot, van Deventer, Ireland, Kowalewskij, Lange, Lombroso, Obersteiner, and Seguin. The acting editor is Dr. Hans Kurella, a man of extraordinary attainments as a linguist, and the *résumés* of contributions to neurology and insanity from all languages promise to be of great value. Contributions can be made in French and English as well as in German. The principal original articles are on Recent Advances in Criminal Anthropology, by Professor Lombroso, in French; on Reformatories, by Dr. W. Sommer; and on the Connection of Influenza with Nervous Diseases and Insanity, by Director van Deventer.

The Brain without Corpus Callosum.

G. Jelgersma ("Neurologisches Centralblatt," 15th March, 1890) expounds his theory about the appearances in the brain in which the corpus callosum has been found wanting. He observes that the new-born child, with a brain one-third of the adult size, has almost all the typical convolutions and most of the secondary ones. The rest appear before the end of the second month. After this the brain grows as a whole. He thinks it probable that there is a constant relation between the quantity of the grey matter of the brain to that of the white matter, but where the corpus callosum is absent the white matter is diminished. The thinner the cortex, the greater winding of the convolutions. The space left by the want of the corpus callosum and the deficiency of the white substance is filled up by the extension of the lateral ventricles and the increased subdivision of the gyri. Deficiency of the corpus callosum is so rare that few have seen a single specimen of it, much less two; but Jelgersma finds by studying the cases described, that increased number of the convolutions and irregularity in their character with increased extent of the lateral ventricles, go together in every case save one in which the gyri were found increased, but the lateral ventricles were of normal extent. In those cases of idiocy in which there is failure of the corpus callosum he thinks that the grey matter is deficient in quantity. Jelgersma makes the morphology of the brain in such cases very much a case of packing. The cause of congenital deficiency of the corpus callosum is not known. It is generally combined with other abnormalities of the brain. Where it occurs alone the mental functions do not seem to be deficient.

Hallucinations.

Drs. Tomaschewsky and Ssimonowitsch have given a remarkable case of hallucination in the Russian "Wjestnik psichiatrii i nevropatologii," 1888, vi., of which we take a report given in the "Neurologisches Centralblatt," No. I., 1889. The patient was a Jewess, aged 33, with no hereditary disease and enjoying good health, but she had been frequently ill-used by a drunken husband who had struck her on the head. Several months before her entry into the town hospital of Odessa she had several attacks of general convulsions with loss of consciousness. She was admitted on the 31st January, 1886, labouring under an attack of *paranoia hallucinatoria acuta*, the principal symptoms being excitement, sleeplessness, delusion of persecution and illusions of the senses. These passed quickly away, so that after six weeks she was so much improved that she could be discharged. The hallucinations of hearing from which she principally suffered during her illness were of two distinctly different kinds; she heard with both ears the voices of her tormentors, the sound of flying birds, etc., and localized these illusions in outer space; she also had a series of subjective hallucinations of hearing in the left ear; the latter commenced earlier than the other illusions and could be suspended by stopping the left auditory passage. On examination of the left ear there was noted diminished sense of hearing, with chronic catarrh of the left Eustachian tube. There were, at the same time, hallucinations of touch on the left side, and, perhaps, also illusions of muscular sense. The patient imagined that the persecutors pulled her sheet and bed cover from the left side. During several years which the patient spent out of the hospital, the noises of the left ear still continued. She heard sounds like the crackling of burning wood, the fluttering of birds and loud laughter. These illusions became weaker and at last disappeared. They were replaced by a singular hallucination of vision. The patient saw continually in the field of vision of the left eye, sometimes in the centre, sometimes at the outer half of the eye a white dog in the act of springing. This appearance annoyed her very much, although she clearly recognized that it was but the result of disease. She saw the dog even when the eyes were shut. The power of vision did not seem to be altered in either eye. From time to time she had attacks of epileptic convulsions. On the 14th February, 1887, the patient was again received into the hospital and died thirteen days after. During this time she had very frequent convulsive attacks. Sometimes the spasms implicated the muscles of both sides of the body in a certain order. They began at the orbicularis oris, then seized upon the right half of the face, and then spread to the muscles of the left neck, and the left leg and arm, after which they would pass over to the limbs on the right side. Sometimes they would stop at the left side of

the body, sometimes the left arm would also escape. Towards the end the spasms were confined to the left side of the face with conjugate deviation of the head and eyes to the left. During the fits consciousness was lost. On examining the patient during the short intervals between the fits there were found paresis and diminution of sensibility of the right half of the body and a contraction of the field of vision of both eyes. The hallucinations of hearing and sight were no longer apparent; the bodily temperature was increased. The patient fell into a state of utter exhaustion and coma with œdema of the lungs and finally sank. On examination after death there were found hyperæmia of the inner table of the skull extending to the spongy substance. The dura mater on the right side was thickened over the lower half of both median gyri, the posterior half of the first temporal convolution and the gyrus supra-marginalis and angularis, and the posterior half of the first temporal were thickened, injected, and bound to the pia, and partly adhering to the brain substance. On these places between the thickened dura and the surface of the brain there was a layer of new tissue, the cortex seemed thinner, and about the middle of the posterior median gyrus had quite disappeared, so that the thickened membranes were united with the white substance of the brain. Drops of mucus were noticed in the middle ear. No alterations were found in the nerves and optic tracts. On microscopic examination of the affected parts it was found that where the membranes adhered to the brain, the neuroglia had developed at the expense of the nerve elements. In the cortical substance around, the nerve tissue still persisted, but in a hyperæmic state, and was infiltrated with lymphoid corpuscles. The authors think that in this case a process of irritation had been going on in particular parts of the brain cortex which was the cause both of the convulsive attacks and the unilateral hallucinations. As the nerve elements disappeared to be replaced by connective tissue there was a cessation of the symptoms of irritation in the auditory and visual areas as well as of the spasms affecting the left arm, of which the corresponding motor centre was most deeply affected. The author considers that this case confirms the cortical theory of hallucinations, and no doubt Dr. Auguste Tamburini would regard it as a confirmation of his views. He holds that irritation of a motor centre causes convulsions and that irritation of a sensory centre causes hallucinations, and here we have the same irritation acting in motor and sensory centres at once and causing both spasms and hallucinations.*

Insanity with Multiple Neuritis.

Dr. S. Korsakoff, of Moscow, describes in the "Allgemeine Zeitschrift für Psychiatrie," xlv Band, 4 Heft, a form of insanity

* Sulla Allucinazioni Motorie. Reggio-Emilia. 1889.

combined with multiple neuritis, to which he gives the titles of Psychosis Polyneuritica, seu Cerebropathia psychica toxæmica. It is the result of blood-poisoning, which affects the whole nervous system, especially the peripheral nerves. It falls more frequently under the observation of general practitioners than of those engaged in the treatment of the insane. The blood-poisoning which thus acts upon the nerves may be owing to the puerperal state, to typhus, tuberculosis, diabetes, jaundice, or to the toxic effect of arsenic, lead, carbonic oxide, or ergot. I have myself seen similar symptoms follow malarial fever. It has been frequently described as a variety of insanity from abuse of alcohol; but Dr. Korsakoff has seen as many as fourteen cases in which there had been no abuse of alcohol. The existence of neuritis along with insanity, to Dr. Korsakoff's mind, is evidently the essential characteristic of the disease. In one patient, who died at the Psychiatric Clinique at Moscow, he found a degenerative neuritis in almost all the nerves. In some nerve bundles the alteration had quite the character of the segmental periaxile neuritis described by Gombault. The patient complains of weariness; the gait becomes uncertain; he has pains in the arms and legs; the muscles waste away, now and then it comes to something like paralysis and contractures; the electrical contractility diminishes; the patellar reflex is much less lively. Sometimes there is great irritability of temper with confusion of ideas; more rarely there is apathy. Often the patient cannot sleep at night, is fearful, wishes someone to sit by his bed. The memory is much affected, the patient forgets recent occurrences, while what took place long ago is better remembered. Sometimes the memory gets so bad that the patient during one interview repeats the same question, or tells over the same story, or forgets what happened to him the same day. There is also incoherence of ideas, sometimes with illusions of sight and hearing. Sometimes the irascibility rises to maniacal delirium; at other times the patient will sing songs the whole night long or murmur words in a low tone. The symptoms are seldom stationary; the mental condition gets better or worse with the general health. The prognosis is so far good that recovery generally happens in the course of time, sometimes in a few months, oftener after several years.

In the "Archiv. für Psychiatrie" (Band xxi, Heft 3), Dr. Korsakoff describes six new cases of this form of insanity. Two of the patients had spasmodic movements in the feet and hands, resembling athetosis. Three of the cases ended in death, but there were no post-mortem examinations obtained.

Traumatic Epilepsy treated by Trephining.

The following case is taken from the "Finska Läkararesällskapets Handlingar," Band xxx, No. 2:—A Finnish peasant,

43 years old, received a blow with an axe on the head, causing pieces of the bone to come away. A large depressed scar remained, which was painful on pressure. He became subject to epileptic attacks, from three to ten in the week. The scar was of a triangular shape, from 2·8 to 3·2 centimetres long. It was situated above the left ear, about five centimetres in front of the binaural line. A depressed piece of bone belonging to the internal table was removed with the trephine. At first no motion was noticed in the exposed portion of brain; but the brain-pulsations gradually appeared in about a minute after the bone was removed. Some hours after the operation the patient had two fits, and on the third day a single one of lighter and shorter duration. The operation was performed on the 26th November by Dr. Saltzman, of Helsingfors. On the 17th December the man was sent out quite well. To guard the weak point in his skull, he wore a piece of brass lined with leather.

Another case.

In the "Centralblatt für Nervenheilkunde," 15th May, 1889' there is a report of a case of epilepsy, probably not traumatic, also treated by trephining. The patient had been subject to epileptic attacks for ten years. He was under the care of Doctors Bendandi and Boschi. For the last year the fits had become very frequent. He had hemiparesis with contracture of the flexors of the right arm, and spasms of the right side of the face. The trephine was applied over the left median gyrus; they then divided the dura, and made an incision three centimetres deep into the brain-substance, but found nothing. It seemed as if there had been œdema causing compression of the brain. Three weeks after the operation the hemiparesis had disappeared. After this there was a rapid improvement in the use of the arm. Two months after the operation the man still remained free from the epileptic fits.

The Autobiography of a Hallucinated.

For this curious description of the hallucinations and delusions of a paranoiac, we make use of the abstract of Dr. Kurella in the "Centralblatt für Nervenheilkunde," 1st Oct., 1889, No. 19:—"The man (a former patient of the hospital) has intercourse with me through walls and everywhere. I answer him often with my mouth shut and without uttering a sound, and he understands me quite well. The man can attend to my apprehensions, impressions, ideas, and thoughts; he can also sharpen my attention or lead it away; he can bring an image into my eye as if I saw a drawing. He can guess thoughts, cause dreaming in the night and while awake, speak through walls and everywhere to anyone.

"(b) *Apprehensions*.—1. My nerves. Auditory nerves. Often when I read I listened against the wall and was forced to believe

that the clock on the wall read with me. When I wrote, the same took place. The pendulum of the clock must know what I wrote. What is unusual with these apprehensions was that the cause of the ticking did not require to be present at the place where I should have expected it to be, but that it is in a man of about 80 years, below middle height, who usually wears a wig; he generally sits still there and seems to do nothing.

“*Visual Nerves.*—I once saw in my eye by the clear light of day, and while perfectly in my senses, a very lively, coloured picture (a small landscape), though there was nothing like it near. I also saw all around darker than natural during the day and coloured like a photograph.

“(c) *Nerves of the Will.*—I have several times felt an unwonted inclination to move my arms. Sometimes a too early weariness in my arms. Sometimes I have felt letters or words in my throat which came there without my will. It often happened that I made slight movements without being afterwards aware that I had intended it.

“(d) *What the man observes.*—The man told me on some occasions often, and on other occasions now and then, what I see, the posture of my body, names of people of whom I think, what I have undertaken to do, what I did formerly, and what no man could know; what I pray. He makes remarks on my reading; he observes what I think, and at the same time he makes me aware of an image in my eye which had escaped my attention.

“(e) *Attempt at Explanation.*—Two things are certain—1. The man had an extraordinary perception of what I felt and thought, and also what occurred in the passage of my nerves. 2. I was distinctly aware of words as impressed by the man on me, while anyone standing close to me is not aware of it. Therefore I hold—1. That the man draws me out from the crowd of my connections with his practised and fine power of apprehension which he receives at the same time, for example, when I see an image in my eye. 2. And that it is not through the air that he is revealed to me, but through the æther. The vibrations of the æther can go in straight lines, while the sound-vibrations of the air go in ever-increasing circles to all hearers.”

The remaining jottings (which take up 200 printed pages), adds Dr. Kurella, rather give interpretations of the sensations of the patient than descriptions of them, and fall into the common symptoms of paranoia.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN
AND IRELAND.

The Quarterly Meeting was held at Bethlem Royal Hospital, May 15, 1890, the President, Dr. Newington, in the chair. Present:—James Adams, S. H. Agar, Robert Baker, Fletcher Beach, G. F. Blandford, David Bower, Crochley Clapham, Wilson Eager, Edward East, C. Theodore Ewart, J. E. M. Finch, Morgan Finucane, Bonville B. Fox, F. C. Gayton, W. Habgood, Henry J. Hind, Charles K. Hitchcock, Theo. Hyslop, Thomas Ireland, Fred. Needham, H. Hayes Newington, David Nicolson, S. R. Philipps, J. Pietersen, F. W. Pilkington, J. H. Paul, J. Peeke Richards, B. W. Richardson, F. L. Rogers, G. H. Savage, Walter Scott, C. T. Sells, Robert V. Skinner, R. Percy Smith, W. Beattie Smith (Victoria), J. Beveridge Spence, S. A. K. Strahan, F. Wyatt Thurnham, C. M. Tuke, D. Hack Tuke, E. B. Whitcombe, Ernest W. White, J. Wiglesworth, A. Murray Will, J. Kennedy Will, T. Outtersen Wood, F. Woods.

There were elected as ordinary members:—James Ross, M.D.Aber., F.R.C.P., Physician to the Manchester Royal Infirmary; Robert Reid Alexander, M.D.Aber., Medical Superintendent, Male Department, Hanwell Asylum; Douglas Hamilton Anderson, M.B., C.M. Edin., Assistant Medical Officer, Hull Borough Asylum; Telford Smith, M.D.Dub., Assistant Medical Officer, Royal Albert Asylum, Lancaster; Wm. Johnson Smyth, M.B. and C.M. Edin., M.C.P., Assistant Medical Officer, Kent County Asylum, Maidstone; John Turner, M.B., C.M.Aber., Senior Assistant Medical Officer, Essex County Asylum.

The PRESIDENT: Before proceeding to the next business on the agenda, I wish to say a few words with regard to an important subject that has been brought to our notice with regard to the statistical portion of the reports of medical superintendents of county asylums (See Occasional Notes of the Quarter, p. 387). Then I have to announce that the Annual Meeting is fixed for July 24, at Glasgow, under the presidency of Dr. Yellowlees.

Dr. C. THEODORE EWART then read his paper, "Cycling for the Insane" (See Original Articles.)

The PRESIDENT: I am sure the thanks of the Association are due to Dr. Ewart for his very pleasant and well-written paper. He has enforced in strong words the necessity of exercise for the insane, and has somewhat ingeniously suggested that cycling will be one means of securing that exercise. The subject is safe in his hands, and some of these days no doubt he will be able to give some practical application of his theory. How he will get over the difficulty of supplying cycles to various patients I do not quite see, but now that he has suggested it I have no doubt it will be followed up by someone or other if not by himself. I beg to call on Dr. B. W. Richardson, President of the Society of Cyclists.

Dr. B. W. RICHARDSON: I feel very much honoured, Mr. President, in being invited to come here to listen to the excellent paper of Dr. Ewart's. I believe I am expected to say something, first, about the effects generally of cycling on health; secondly, from my experience as a practical rider about machines; and thirdly, about the value of cycling for the insane as a means of relief or cure. The experience of cycling I have had personally during many years, and the experience I have received by word of mouth from those who have ridden with me is all in favour of cycling when it is carried out in the way which Dr. Ewart has described. There cannot be a doubt as to the excellent effect that cycling has upon health. I have compared it with horse riding. I was at one time quite as fond of horse riding as I have been since of cycling, and I have not given it up. I think on the whole there is no mistake

about it that cycling gives better health and better spirits than horse riding. There is something in the motion of horse riding which is fatiguing, and you cannot keep up distance in riding on horseback so well as you can in cycling. When trying to compare cycling with walking exercise, there is great difficulty of comparison. Walking exercise becomes extremely monotonous and miserable when you once become a cyclist; in fact, I never pass a pedestrian but what I feel heartily sorry for the man as he goes so wearisomely along. I have met with a few pedestrians who have fought it out with me that walking is better than cycling; but when in the evening we have been seated at table talking over the events of the day, and they have described the labours they had gone through compared with what a cyclist would have experienced, they generally come over to the cyclist side. On all these points I would support Dr. Ewart, and would emphasize what he has quoted from my paper that as regards muscular mischief. I have never seen any from cycling when it has been properly carried out. I have known of persons who have outwearied their muscles on cycles; sometimes young ones and sometimes old men do weary out the muscles, and it must be said with regard to cycling that certain muscles of the body are wearied out quicker than others. There is no universal distribution of fatigue of the muscular system from cycling, and that leads to a common feeling on the part of cyclists without their knowing the explanation of it. A cyclist will go on for a great many hours feeling no sense of fatigue, then suddenly he will become fatigued and go to bed, thinking he will lie down and sleep the whole night through; but it is only the lower muscles that have been excessively fatigued, and the effect of sleep is to bring back vigour and refreshment to the lower limbs, but not to the heart and to the upper part of the body. The result is, and I have experienced it myself, that the cyclist gets up in the morning feeling ready in the legs to cycle again, but the rest of the body is wearied. Moreover, there has been no long or profound sleep owing to this irregular distribution of muscular fatigue; there have been dreams of motion along the roads, rapid movements, and sometimes twitchings in the upper part of the body and even the lower part of the body, and then it takes some time before all becomes level again. That, I think, is something to be very carefully considered and very carefully avoided. With regard to machines, we have made wonderful improvement of late years. The tricycle that I originally rode weighed 140lbs., I now ride one that weighs a little over 50lbs. The matter of weight of machine is of immense importance with regard to those who are going to undertake exercise on a tricycle. Heavy machines become very serious obstacles to anything like a successful result, and the difference of carrying even 20lbs. in the course of a moderately long day is very considerable. The machine which answers best is a light machine, whether it be bicycle or tricycle. Size also is of great moment. We began by having very large wheels, thinking by that means to get pace. There are certain advantages in a large wheel no doubt, but there are many more disadvantages. There is the disadvantage of getting on and off, and there is the great disadvantage of windage. Taking everything into consideration the small wheel, geared up moderately, is the best. I find that with a wheel of 35 geared up to 46 I can work most comfortably. As to the character of the machines, there are so many good ones now in the field that I really do not know which to recommend as the best. The one that I ride is called the Invincible, but I am having one now made which introduces a new element. The old machines vibrated greatly, and the degree of fatigue which came on from vibration was as severe as the muscular exercise. There are four kinds of vibration on a cycle. First there is the vibration from the saddle, which may be called the spinal vibration, extending along the spinal column, which is worst of all; there is the vibration obtained from the feet by the feet coming down upon the peddles, a minor vibration but well spared; there is vibration from the hands in grasping the guiding bar or handles, and very fatiguing; and there is a lateral vibration which is considerable in some machines, and by-and-bye produces a sensation like sea-sickness. I have known

sickness produced by this lateral vibration. A few years ago all machines were largely faulty in regard to vibration, but now improvements are steadily progressing. Inch rubber tyres, rubber handles, and rubber peddles are advances, with others arising from various kinds of springs under the saddles. Now has come the last improvement, not elegant, in what is called the pneumatic wheel. In the machine I am having constructed, called the Fleetwing, vibration is saved by a new principle. The seat of the tricycle swings, and the rider is cut off from the vibration; he sits, as it were, in a swing. Such are the points I would name about machines, and now I will come for a moment to the all-important question whether we can apply cycling with advantage for the use of the insane. Of course there must be very great care taken as to the class of patients with whom cycling should be tried. It is an extremely exciting exercise, and its value, good or bad, turns upon that even in the healthy man; it is an exercise which, in this respect, is always calling for care. Even in riding one has to be always on the look-out; when there is any abstraction it is very easy to get into difficulty. Therefore the class of patients to be trusted on the tricycle must be comparatively calm and collected; though they may be irregular and wanting in proper mental power they must have a certain degree of calmness. Then I should say, at all events until everything is known about it, they should not be persons inclined to acute attacks of mania. I think cycling probably would be dangerous for them. It should rather be an exercise for the melancholic class, for which I have no doubt it would be an extremely valuable remedy. I take it that in extreme melancholia the melancholics make in their body a volatile substance which is the cause of the oppression, and from the odour of the breath and many of the facts connected with the synthesis of melancholia which I have seen, I think we ought to be getting very near to a knowledge of the poisonous principle which is its work. I have no doubt it belongs to the sulphur class, like mercaptan, and its elimination by exercise ought to be one of the most determinate and proven facts. Apart from theory for people of a melancholic tendency, this mode of exercise will be exceedingly good. We see in practice many hypochondriacal and melancholic people, and I have found the cycling exceedingly good for them. I have lately seen a member of our own profession gradually dropping into suicidal melancholy make a recovery and return to his professional work within a short time, and with good results that were never expected, simply from taking a tour on a cycle. Dr. Ewart referred to what is called the Victoria machine; that is a multiple machine where a number of cycles are put together and go in a row with one man directing. I am sorry to say I could not quite agree with him in the use of that machine by the insane. It has not turned out particularly well even with sane persons, and it is not particularly safe; also it is not pleasant to the mind. People do not like to be guided by another person, they like to guide themselves, and pleasant riding means freedom from control. It is true that a gentleman and lady will go on a tandem, and the lady will let the gentleman guide; but two gentlemen going together generally get irritable; I have noticed that. One wants to go one way and one another, one wants to go down hill at one pace and one at another pace; one thinks there is danger when the other does not see it, and a great deal of discomfort arises even on a tandem in that way, but on a Victoria the dangers are infinitely increased in that respect. I once near Hastings witnessed a quarrel between six men who were going on one of these machines. I think you would not get insane people to like that mode of riding; they would like to take their own course, and the persons who are the most nervous generally like to take their own course. Besides, it is not quite such easy work, for unless all are pulling together and going as one person, the work becomes extremely tedious and very unfair. I should not advise that the insane should be put to gang work of this kind. I think the superintendent of an asylum should begin by getting first what he would consider a single model tricycle for asylum work. Afterwards he may introduce bicycles, but the tricycle should be the machine commenced with—a

tricycle not more than 35 inches in height, and low geared. At first a few good riders should be got to go with the patients and teach them peddling, steering, going up and down hill, and so forth. In a large asylum, in five or six weeks of thorough good exercise and physical education, there would be a good corps of riders. Then afterwards I think when it was known who were safe riders, it would be a grand experiment to take them out for tours; it would make them accustomed to the country round about. Interest would be excited by the objects which might lie in the way. A mental exercise befittingly secondary to the physical would be sure to follow.

The PRESIDENT: We have a great cyclist present in the person of Mr. Williams; perhaps he will let the Association have his views upon the subject.

Mr. WILLIAMS: I am afraid I have hardly anything to say as to the influence of the cycle upon the insane. As a matter of exercise, I have found it an exceedingly good and very safe one, and when taken in moderation it is better than a great many other exercises, and very much more easily managed; for instance, it is very much less monotonous than walking, and as to riding and rowing, it is more easily learnt. I do not think I have anything further to add.

Dr. SAVAGE: There is one point of view from which I should like to say a few words. I have recommended the cycle on more than one occasion, and certainly with satisfactory results. The class of cases in which we have found it most beneficial has been that of aged men who have retired from business, that restless type of individual who feels his occupation gone and wants to do something. A certain number of these men get very depressed and very melancholic. I remember especially in one case where there was a gouty history, that riding from 10 to 15 miles a day, changing the surroundings and yet without fatigue seemed to be extremely useful to the patient. I suppose Dr. Baker would be inclined to say "Oh, yes, it is rather a laborious way of taking a Turkish bath." I should feel inclined to agree that the great appeal from the brain is to the skin, and if you can get an improved circulation, whether by change of air or by exercise, we shall do good to a very large number of melancholic patients. One always thinks of what Dr. Wilks, of Guy's, in years gone by used to say: "I believe if you could make all your melancholic patients march three or four miles an hour with heads up in the open air, they would soon cease to be melancholic." One feels inclined to think so too, only you cannot make them do it. One advantage of the Victoria machine would be that you would be able to make certain persons move rapidly through the air when they would not voluntarily do it themselves. I only rose to say that I have already tried it. There was rather a startling article in the *St. James's Gazette*, I think on Monday last, written by someone who evidently did not believe in exercise, saying that we were constantly sacrificing to that idol of exercise, but that if you looked to London you found there more healthy people than you would find anywhere else, if you looked to London you found more lazy people than you found anywhere else, and if you looked among the laziest of London people you found the very healthiest.

Mr. RICHARDS: I do not know whether Dr. Ewart has had any practical experience in the way of tricycling amongst the insane; I think his paper must be only theoretical, otherwise doubtless he would have produced some cases in which he had seen beneficial results. I think the first thing one would have to do in our large county asylums, or in fact in any asylum, would be to educate the attendants,* and you must have a staff of attendants who are sufficiently skilled to be able to outrun any of the patients, otherwise you might get patients who were better performers on the tricycle, and then when they went out with an attendant you might find the patient heading straight for a pond in view and the attendant would not be able to catch him. I quite agree as to the un-

* Some of the attendants at the Hanwell Asylum are experienced cyclists, and would be quite able to go out with patients.

desirability of using the Victoria tricycles where they have six or seven in a row. If you have six or seven patients all taking a great interest in what they are individually doing, the man in the middle might tumble off in a faint or a fit and yet the others would take no notice, and he would simply be found hid up in the machinery before anybody could stop. There are some little difficulties attending tricycle riding—I know it in my own practical experience. Dr. Richardson has said that he never knew a case of rupture of muscles or anything of that sort to occur. Neither have I, but I remember some two or three years ago when at the seaside with my family, my boys induced me to try a tricycle. I did so, and got on pretty well for a day or two, taking some rather long rides. I came back to work for about a week, and then I left for the Continent. When I got to Cologne I found that I could not pass my water, and I could not make out what on earth was the cause. I went into a chemist's shop to try and get something or other, but it was no use, and a pretty quandary I felt myself in. On reflection I began to think whether it was the tricycle that had done it; that being so maladroit in the use of the instrument, I had, perhaps, shuffled about on the saddle a good deal, and I have no hesitation in saying that that really was the cause, and had produced spasmodic stricture, because in another year, when on the tricycle again, not having tried it in the interval, the same thing happened again. That is to be borne in mind when you first of all get patients to use the tricycle. I presume that all this tricycle riding would have to take place in the country, because the grounds of the asylum would not be large enough to afford room for the practice. If your own grounds were large enough it would be certainly very beneficial, but I doubt very much that the beneficial effect is due, as Dr. Savage has said, to perspiration, for if a man becomes a good cyclist, such as Dr. Richardson, I believe that at the end of 50 miles he would find that he would not have turned a hair, so that there would be no perceptible perspiration on his body.

Dr. FLETCHER BEACH: Dr. Richardson omitted to mention what influence the use of the cycle would have on the superintendent of an asylum. The mind acts on the body and the body on the mind. The superintendent of an asylum cannot do his work well unless he is physically in good bodily health. As an old cyclist, I know there is no exercise that enables me to do my work better. For instance, after doing literary work of the day—perhaps the secretarial duties of this Association—I run away into the country 20 or 30 miles, come back with a pleasant feeling of fatigue, go to bed, sleep, and next morning get up to work. Therefore I think it would be a good practice for all superintendents of asylums, especially county asylums, to ride bicycles. And not only that, but asylums now have become so very large, and the distances that have to be traversed to see your patients, especially when the asylum is constructed on the villa system, at distances from each other are so considerable that you would save a considerable amount of time, if instead of walking from one building to another you could ride a bicycle or a tricycle; you would not only save time, but would come back with a pleasant feeling of fatigue instead of being tired out. I think Dr. Richardson is quite right in saying everybody should begin with the tricycle at first, unless he is a young man. If he is a young man I should tell him certainly not to ride a tricycle, but a safety bicycle. You cannot possibly have any accident, because if you think the bicycle is going to upset, all you have to do is to lean on one side and quietly stop it. There is no jumping off as in the high bicycle of former days. As to the point that the wheel should not be too high, the safety bicycles at the present time are made with wheels 30 inches in diameter, therefore you do not have a long distance to get on or off. I have no doubt that moderate exercise is what should be aimed at. There is another question, that of vibration, which Dr. Richardson spoke about specially. The spinal vibration that you get from a rigid machine, especially after 20, 30, or 40 miles, if you go on day after day begins to tell. The only machine I know at the present time which avoids this is the Whippert's Safety. Underneath the saddle there is a spring, and therefore instead of having a rigid shock

you simply go up and down as in an easy chair. Underneath the handles there is another arrangement for taking up the vibration, so that you come back from your ride simply tired from fatigue and not from vibration.

Dr. PERCY SMITH: I have known one case in which a person broke down from exhaustion from riding on a bicycle, and one of my colleagues told me he has known a similar case.

Dr. HACK TUKE: That happened to a patient of mine some time ago. He had, however, been three days on the road in a very hot sun, so that perhaps the attack of insanity can hardly be laid to the door of the bicycle so much as to the heat. I think we are much indebted to Dr. Ewart for having brought this subject forward in so interesting a paper. I think the paragraph in his communication which will be most interesting to the patients themselves, will be that which refers to "aërial bicycles." I think if Dr. Percy Smith allowed his patients to go out from Bethlem Hospital on one of these, the time of their return would be rather doubtful.

Dr. BAKER (York): I thought Dr. Ewart would have alluded to the case of children who are not quite strong in their muscular or mental development. I have seen cases where children who would have been hardly expected to be able to control a tricycle or bicycle have shown very considerable power in doing so. Of course it is very much safer to trust them on a tricycle, but in one or two cases they have managed the bicycle remarkably well, and have shown considerable muscular power.

Dr. EWART, in reply, said that with regard to what had been said as to the Victoria tandem, he did not see if they had an attendant in front and one behind they could possibly have any patients fall off without its being known that they had done so.

Dr. STRAHAN then read a paper on "The Propagation of Insanity and allied Neuroses." (See Original Articles.)

The PRESIDENT: Dr. Strahan has, without doubt, read us a valuable paper, and one that covers an enormous ground, and ground which of course we could not follow him over at one meeting. I am sure that he has the sympathy of every one of his hearers in his views as to our duty to obviate the propagation of insanity as much as possible; but I am not quite so sure that his gloomy forecasts are borne out by facts. The whole thing turns on an old question. Of course, if you take two obviously insane persons and marry them, the chances are ten to one that something very unhealthy is procreated; but taking the average marriage that goes on now of a healthy person with an unhealthy person, a slightly-tainted person with a slightly-tainted person, and so on in various degrees, it is very doubtful whether much harm is really done. If I have correctly understood the paper, the whole question turns on 'the absolute amount of insanity in the kingdom—whether it is increasing or whether it is decreasing; and, out of the many points in the paper, this one only is that on which I shall make remark. As Mr. Noel Humphrey properly pointed out at a meeting of the Statistical Society a little time ago, we must be very careful, in estimating the amount of insanity in the kingdom, to distinguish between mere accumulation and what is called occurring insanity. Of course, as Dr. Strahan has shown by figures, the large increase in the total number of insane people on the books of the Commissioners in Lunacy is undoubtedly due to the fact that the addition is not compensated for by the removals by death and discharge. There is no doubt about that; but that is not the difficulty besetting the question of the increase of insanity. The difficulty is this—that there is probably a very large proportion of real insanity outside asylums, and that proportion does not come under the Commissioners' notice at all, nor under our notice as Asylum Superintendents. Therefore there is a large amount of insanity that does not come within figures, and cannot be computed by figures, and at first sight it seems hopeless to attempt to gauge the amount of insanity, seeing that we do not know how much undeclared insanity there is in the kingdom. I have from time to time taken the statistics for many years past as

they occur in the Blue Books and in the Asylum Reports that reach me. I have always been struck by one thing—that is the strange consistency of the figures from time to time of insanity in various forms; so much so that I have been almost tempted to say that insanity has laid down laws for itself, which it follows with marvellous consistency. I have taken the proportions of mania to the whole number of admissions. I have found the proportion of mania to the total insanity admitted into asylums in the course of one year, the proportion of melancholia, the proportion of mania and melancholia as between male and female, and the proportion of mania with melancholia as between private and pauper patients, hardly vary from year to year. The same is the case with general paralysis of the insane. Almost the same number of people become general paralytics and epileptics year by year. Then, again, with regard to the occupations, we know the Commissioners have got together an increasingly valuable series of figures obtained from the various superintendents as to the occupation and various other items of information connected with patients who are admitted. I am only talking of the admissions of each year. The occupations vary very little. The tailors furnish so many inmates into the asylum—clergymen and people where there is a definite profession or calling—the numbers from that definite calling come in year by year very much in the same proportion. And then, too, in the same way with the causes. We know what various views we all have on the question of how far intemperance produces insanity. The assigned production of insanity by intemperance varies little; senility varies little; even insanity from accident varies but to a small decimal in the 100. Sunstroke, I think, is responsible for 1·5 out of every 100 admissions in the course of the year, and not only that, but even the item “unknown”—where no cause can be assigned—is much the same year by year. And then, too, with regard to the suicidal propensity, the manifestation of suicidal propensity in admitted cases is the same year by year, and not only so, but in unvarying proportions as between the sexes, male and female. All these considerations have led me to believe that insanity has laid down laws for itself, which it closely follows, whatever men may do. It may be that for a few years some large popular movement, such as drink or famine, may affect the progress of insanity; but it appears to me that, short of anything of that kind, we go on much the same year after year, that is, as far as declared insanity is concerned; and if that is the case, it is not too much to ask whether undeclared insanity will not always bear the same proportion to declared insanity year by year; and I really think that is a fair and possible way of looking at the matter. I think Dr. Strahan said there had been a slight increase within the last few years. If I remember right, the average for the last 15 years of “occurring” insanity per 10,000 inhabitants was 5·15, that is to say, 5·15 out of every 10,000 inhabitants of this kingdom went wrong in their minds.* The proportional average is right for this year. But only as late as two, three, and four years ago the numbers of admitted were below the average for the fifteen years. So that we may consider that there is no very great increase in the amount of declared insanity; and I should suggest that it is quite fair and possible to infer that there is no increase in the undeclared insanity, and that fears as to the positive increase of occurring insanity each year in this kingdom may well be allayed.

Dr. B. W. RICHARDSON: I should like to ask a question. I think, sir, your argument would really go to show the strength of Dr Strahan's proposition. I did not understand Dr. Strahan to say there was a great increase of insanity, but he seemed to my mind rather to be thinking of the way by which the present insanity, declared or undeclared, could be reduced. That seemed to me to be the point of his paper, without holding out any fears about the increase of insanity. It seems to me that your observation, sir, would exactly sustain what Dr. Strahan has said, namely, that there is an amount of fixed insanity which

* It must be remembered that these numbers do not represent first attacks—the only correct test of occurring insanity.

depends upon the laws which insanity, as you urge, has made for itself ; thus breeding in and in would just produce the effects you have described, although it might not cause increase. Would not, therefore, what Dr. Strahan proposes be equally good if the excellent suggestions you have made are fully admitted ?

The PRESIDENT : I rather took it that Dr. Strahan attributed a certain amount of increase in our present insanity to the habits and customs of the people, now that we are breeding insanity on account of our increased civilization rather fast.

Dr. B. W. RICHARDSON : I do not think he meant anything more than increased insanity in relation to increase of population. But there is another point Dr. Strahan referred to that should be answered by this Society. It opens a very important question, perhaps one that will seem strange. I mean whether there is anything like continuous transmission of insanity through the *female* line. I can understand that there shall be an insane woman who will have an insane child, but if you trace that insanity back through the male line, shall we not find some connection or descent on the male side ? Or, I should say, is not the insanity transmitted through the woman of very slight duration, not lasting beyond a generation ? I take it that really and truly all taints come from the primitive man—all changes that are hereditary—and that it is impossible to suppose them originating from the woman. I think this Society could very well work out that great question, if statistics could be got showing how far the disease, as we call it, of insanity extends primitively from the woman as compared with the extension primitively from the man. The returns might bring out a series of facts also with regard to the propagation of general appearances and the continuation of proclivities, marking distinctly, as I ventured to submit, that all that is racial is derived originally from the male and not from the female subject.

Mr RICHARDS : I am inclined to agree somewhat with Dr. Richardson. I do not think as a rule, if you trace a case out to hereditary descent, we should find it so frequently occurs from the female strain. If you take the trouble to inquire into an hereditary case of insanity, you will find nine times out of ten that it does come through the male line. I do not think it necessarily follows because a woman may have puerperal mania that she has always a puerperal form of insanity, and she is going afterwards to beget insane children. I know time after time I have inquired on that point as accurately as possible, and I have never been able to trace it ; so that I quite agree with what Dr. Richardson says—that the hereditary taint does come through the male line. I agree with the purport of Dr. Strahan's paper. What he was aiming at was this—whether something could not be done, not so much to prevent the increase of insanity, but to prevent, by means of legislation, insanity being created at all. I think it is a very long time before you will ever get any Legislature to do that, because you know you may have stock from a very tainted source, both male and female, perhaps, for a generation or two back ; but it does not follow that every one of the offspring from that source will be insane. There may be ten children and only one be insane, and is the Legislature to step in then because there is one insane out of such a progeny as that ? There is another thing to be taken into consideration : How many generations is the Legislature to go back ? You know very well that, as in all other hereditary diseases, it will skip a generation or two. Is a man or woman to be prevented from marrying because four generations ago there was a member in their family who was insane ? I do not think you will ever get any Parliament to sanction legislative interference.

Dr. BONVILLE FOX : My experience is, comparatively speaking, a limited one with regard to family histories. In another way it is a fortunate one : The number of patients that come under my notice in the course of the year may be small, but I have fortunately been happy in their relatives in one way—that as far as I can ascertain they have told the truth, or, at all events, they have not

declined to answer questions. I have only on one occasion been met with a blank refusal. Fifty per cent. of those persons who have come under my care in the last ten years have had an insane or neurotic family predisposition. I do not like to say "inheritance," because I think that is perhaps rather a different question; and the conclusion which one has to draw from their history is whether the relationship is sufficiently strong to give any taint. Dr. Strahan has pictured in eloquent terms the evils that arise from the breeding in of disease. He has suggested a remedy; but I am afraid in this room we occasionally soar into the regions of Utopia, and his remedy must, at all events for the present, be classed as a Utopian one. It is, I think, impossible to conceive that the Legislature will for many years to come step in and say to this man: "Thou shalt not marry because you have been insane, or a drunkard, or your father has been insane." I think it is hopeless to look for a remedy in that way. We all know the old tale of a paternal Government making a childish people; and I do not think in the present day English people would submit to anything of that sort. The danger is sure—is present—as far as we can be sure of anything. I have been astonished by two pieces of information I have received. It has been said that melancholiacs manufacture in themselves the poison from which their disease arises. That is perfectly true in one sense; but if Dr. Richardson, of whom I would speak with the deepest respect, suggests that we can specialize that poison, and that it is entirely due to some common poison formed in the body, I would respectfully object to his statement. The other is that the taint is not on the female side. If it is not, I am strangely mistaken, and the history that has been told me, and the facts which have presented themselves to me are most delusive. But I think there is one thing that we, as medical men, may do to check the increase of insanity. It is, no doubt, perfectly true that insanity has maintained pretty much the same proportion; but there are other diseases which did so until comparatively lately. Who would have thought a few years ago that phthisis would be as eminently curable as it undoubtedly is now? And that being so, are we to say that we cannot diminish, if not the extent of insanity, at all events the effects that are so common. I think we can do it, and in one chief way. We are very often appealed to, and I hope as education increases we shall be more often in the case of intended marriage; and I think this gives us the greatest chance of checking the increase of insanity; and it is a question which should be considered not only by those specially concerned in asylum work, but also by family physicians much more than by the Legislature. We have knowledge—they have none. It is our duty to try and spread that knowledge, and by every means in our power to prevent such risks as have been run being run in future.

Dr. FLETCHER BEACH: There is a book probably well known to most members, namely, Huth on "Marriage of near of Kin." The author examined some thousands of examples, and having approached the subject with a perfectly open mind, he came to the conclusion, after going through all these cases, that when both sides of the family are healthy, there is no reason why first cousins should not marry, but that when either side, and much more both sides, are involved, such marriages should not result, and that opinion is held now most strongly by all men who are the heads of institutions. Statistics have brought out, as far as I think possible, that of the cases I have to treat no less than 75 per cent. arise from hereditary predisposition. No doubt it would differ according to the class of case. No doubt in the higher classes of society you do not find the percentage so great, but when you come to the lower classes you find drunkenness, insanity, and imbecility ranging strongly through these families. Of course, in this case, ignorance plays a very common part: the parents of these people are not sufficiently educated to know that dire results will follow. Therefore I am quite of opinion that education will eventually play an important part in preventing such marriages.

Dr. HABGOOD: Dr. Richardson has, I think, put forward a statement that insanity is not transmitted through the female side.

Dr. RICHARDSON: I did not say that; I said that was a great subject for inquiry whether it was. I did not lay it down.

Dr. HABGOOD: You doubted it.

Dr. RICHARDSON: Quite so; and as I said, I thought this Association was just the one to clear that up. My impression is it comes from the man, but I am not dogmatic on that for a moment.

Dr. HABGOOD: It seems to me very extraordinary if a man can inherit certain qualities from his mother, which undoubtedly is the case, for many men seem to have owed their positions in life to having clever mothers, that she should not be able to transmit bad qualities also.

Dr. RICHARDSON: If she does transmit them, I rather think it is the effect of maternal influence during the first years of life.

Dr. HABGOOD: There is one thing which was running through my mind, though it hardly bears upon insanity; it came under my notice the other day, and shows the strong maternal influence in reproducing species. It was the case of a terrier bitch. The father was distinctly different in form and colour, but out of six pups, two took exactly after the father, and four exactly after the mother. There the mother seems to have had more power to reproduce her special form than the father had.

Dr. WHITCOMBE: The subject is one in which I am much interested, but I rise to mention some cases which have occurred in my own experience. One of the first cases I remember was that of a father and son in the asylum, the son presenting exactly all the characters of the insanity which the father had. I have also had the curious experience of delivering an insane woman of a child. The mother had puerperal mania, and curiously enough, some twenty years afterwards I received that child into the asylum suffering from puerperal mania. I have at the present time two brothers and a sister in the asylum, the father and mother being just sufficiently sane to keep out. I have also had the curious experience of two patients leaving the asylum, getting married afterwards, and I have had two of the children as patients since. With this experience, and putting down the cases of heredity at more than 50 per cent., it becomes important that we should not look upon this subject as Utopian, but should see how far we can suggest a remedy. The whole subject is fraught with very great difficulties and danger, but at the same time it is one which should be grappled with in a thorough manner. I may say I believe that in the Code Napoléon there was a clause by which epilepsy nullifies marriage.

Dr. BONVILLE FOX: I may mention one case. A lady was confined, she went insane, the child was perfectly right. The lady recovered, went out again, had another child, became insane, the child an idiot, the lady recovered. She returned home, had a third child, went insane, the child an idiot. The lady went into the asylum, again recovered, went home again; had a fourth child, the child an idiot. Four confinements, three idiots. The lady cut her throat.

Dr. HACK TUKE: I think it is very clear there is no statistical proof of an increase in occurring insanity. It is quite possible, however, there may be an increase in some forms of nervous disease, and probably in regard to suicide; but I should like to say with regard to the latter, that I believe we may over-estimate the amount of insanity in cases of suicide. I do believe a great many of the suicides which we read of in the newspapers, are not the result of insanity at all, but, so to speak, the almost inevitable outcome of poverty, desertion, and vice. I should like to say with regard to the question of legislation, I think the way in which Dr. Bonville Fox has put the subject is by far the most practical one, namely, to do all that we can by advice in individual cases, though even then we must not lay down an inflexible rule. I doubt very much whether the time has come, or ever will come, when legislation can interfere with the marriages of those who have been insane, or who are neurotic persons.

There was an old Scotch law which enacted the castration of epileptics, but we all know that it is not in force now. It may have been a very wise law, but I think any laws made now in that direction would very soon also fall into desuetude. Then supposing the Legislature did interfere with the legitimate marriages of these persons, you would still have a number of illegitimate births among them.

Dr. STRAHAN: They must not be at large.

Dr. H. TUKE: But, pray, how are you to shut up all persons who are pre-disposed to insanity?

Mr. C. TUKE: This is no doubt a very delicate question, especially as regards the upper classes, and I, for my part, quite agree with those who think that it is impossible that the Legislature should take action in the way of forbidding marriages, but that medical men have a great power in their hands to advise persons who very frequently come before them. No doubt very much might be done in this way, if persons would only take the medical men's advice, which they do not always do. But there is one point that perhaps the Legislature should notice more than it has done, and that is cases where previous insanity has been concealed. This point ought to come under notice, and one cannot help thinking it is a most cruel and criminal thing for one family to conceal by all the means in their power the insanity, which is often followed by such cruel results. In this question we can educate, I think, people more fully, and when this danger is thoroughly understood perhaps we shall see less of it.

Dr. STRAHAN: In the case I referred to, public opinion is altogether in favour of legislation, that is in cases where people have been seduced, so to speak, into marriage with tainted persons. Certainly the lawyers, including our best judge, Mr. Justice Stephen, and many of the best medical authorities agree that it should be a ground for divorce, as it is undoubtedly a fraud. The only other question I would refer to is the one raised by Dr. Richardson, as regards transmissibility through the female. Unfortunately, the authorities as regards insanity are strongly in favour of the mother's insanity being much more dangerous to the children. The best authorities support this view. Statistics are given in "Bucknill and Tuke" which show that the insanity of the mother is transmitted at the rate of 60 per cent., while for that of the father it is not more than 40 per cent. It also appears that the transmission of maternal insanity is twice as much to be feared in regard to the girls as in regard to the boys. Then as regards the class of those who will marry for money and that sort of thing, whether the woman or man be insane or not, we could not stop that. But if we were to stop the propagation of all confirmed epileptics and imbeciles that we are turning out—suppose a man has been three times insane, that man should be kept in a kind of industrial home or penitentiary; if we did that for one or two generations we should do a great deal to prevent the spread of this disease. If, on the other hand, we were to adopt the old Scotch custom of castration and spaying, Mr. Lawson Tait would willingly spay the females for a limited sum, and we could work the males ourselves.

The PRESIDENT called the attention of members to a variety of pathological specimens, exhibited by Dr. Percy Smith and Dr. Hyslop, including microscopic sections of the cortex in a case of chronic alcoholism, showing softening, degenerative changes and spider-cells; and section from the motor area in a case of acute melancholia, showing degenerative changes; sections from the cornu ammonis in a case of chronic dementia, and sections of the cortex cerebri in cases of mental stupor and of acute general paralysis; also sections of the upper lumbar regions, showing degenerated cells from a case of senile general paralysis, and of teased-out cells of the anterior cornua from the lumbar region of the spinal cord showing degenerated motor cells.

These beautiful specimens show how much good pathological work is being done at Bethlem Hospital.*

* See Dr. Percy Smith's Notes, "Clinical Notes and Cases," p. 371.

MEMORANDA ON THE NEW LUNACY ACT, 1890.

In the April number of this Journal we briefly indicated the salient features of the new Lunacy Act, but since May 1, when it came into force, many questions and difficulties have arisen in its practical working which have caused much trouble and raised perplexing doubts.

The following are a few practical notes in reference to the new Lunacy Act, which may prove useful, being either the replies of the Lunacy Commissioners to inquiries made by those who are concerned in the carrying out of this ill-conceived and ill-drafted Act, or official statements made in the circulars issued from the Lunacy Board:—

1. The onus of seeing that the patient in an asylum is visited by the petitioner or his representative is *not* cast upon the Medical Superintendent.

2. In regard to the urgency cases, the day on which the Order is signed is not included in the computation of the two clear days.

3. Two clear days are regarded as exclusive of the day of examination for the Medical Certificate and of the day of reception.

4. An Urgency Order remains in force for seven days only, exclusive of the day on which it was signed, unless a petition for the Order for reception be presented and be pending. There is then no alternative if the Act is not complied with but to discharge patient on the expiry of the Urgency Order.

5. The Urgency Medical Certificate must not be one of the certificates accompanying the Reception Order, but the medical certifier of urgency may sign one of the fresh certificates, and need not re-examine the patient, provided the date of examination is within seven clear days of admission.

6. A copy of the Urgency Order and Certificate must be forwarded to the Commissioners within one clear day of the patient's admission.

7. The petition for the Order of reception must be presented within seven clear days of the examination of the patient by the medical practitioner.

8. The day of the date of the Order is not included in the computation of the seven days.

9. No amendment of the Reception Order or Medical Certificates is allowed, unless the same receives the consent of the Judicial Authority by whom the Order for the reception of the patient was made. The initials of the Judicial Authority against any amendment would be sufficient evidence of his consent. The amendment of the defective Order or Certificate must be made within fourteen days. The Commissioners may require a Certificate to be amended, and if this is not done to their satisfaction may discharge the patient.

10. Every Reception Order is, by the Act, made terminable. If dated after the Act came into force (May 1, 1890) or within the previous three months, this Order will expire at the end of a year from its date, unless continued by the Medical Superintendent's Special Report and Certificate.

11. Every Order dated three months or more before May 1st, 1890, will expire April 30th, 1891, unless it is continued by a Special Report and Certificate made by the manager of the institution. If dated on February 1st, 1890, it will fall into this category.

12. The Report and Certificate are to be sent to the Commissioners not more than a month, or less than seven days, before the date on which the Order would expire. Unless objected to by the Commissioners, the Report and Certificate will keep the original Order in force for another year, and after such year it may, by a similar process, be thereafter continued in force for two years, then for three years, and then for successive periods of five years, so long as the patient is detained.

13. The Commissioners have decided that, with respect to patients whose Reception Orders were dated on or prior to February 1st, 1890, all those detained in an institution shall be included in one list or schedule, but that as regards patients whose Reception Orders are dated subsequently to February

1st, 1890, a separate document, containing the Report and Certificate, must be signed and sent for each patient. If, in the opinion of the Commissioners, the Special Report does not justify the Certificate, and they are not by further inquiries satisfied, they may discharge the patient.

14. In addition to the medical statement now sent to the Commissioners after the admission of a private patient, a report of his mental and bodily condition must be sent to them at the expiration of one month after his reception.

15. Letters written by patients and addressed to the public functionaries and other persons mentioned in Sec. 41 of the Act, must be forwarded unopened by the manager of the institution, who may also, at his discretion, forward to its address any other letter written by a private patient. Letters not forwarded need not in future be laid before the Commissioners or Asylum Committee. No instructions are given as to the disposal of such letters.

16. Subject to the authorization by the Commissioners, a patient in an asylum may be examined by two medical practitioners. As a result of such examination, the Commissioners may order the discharge of the patient.

17. The medical officer of a hospital or licensed house may, under the new Act, permit a patient to be absent for forty-eight hours without obtaining the authority of the Commissioners.

18. Provision is now made for the recapture of patients who escape from one part of the United Kingdom to another.

19. Licenses of existing establishments may be renewed by the Commissioners or Justices to the former licensees, or any one or more of them, or to their successors in business. Joint proprietors may be allowed to separate, and each to have a licensed house, so long as the total number of patients does not exceed the number allowed by the joint license. If on the 26th of August, 1889, the licensees of a private asylum had made arrangements to establish another in its place, and if such new house is suited for the purpose, a license may be granted, and may be renewed to the original licensees or any one or more of them, or to his or their successors in business.

20. Private asylums are now permitted to receive Boarders, *i.e.*, "any person who is desirous of voluntarily submitting to treatment," or any relative or friend of a patient, but patients and Boarders together must not exceed the number for which the house is licensed. The intending Boarder alone can obtain the consent of the Commissioners or Justices, as the case may be. A Boarder may leave upon giving to the manager twenty-four hours' notice in writing of his intention to do so.

21. In computing the pension of an officer of an asylum, if he has served in one or more asylums belonging to the same local authority the whole of his service in several asylums belonging to that authority shall be reckoned as if all the asylums had been one asylum.

22. Boarding-out of pauper patients is facilitated by Sec. 57. Pauper patients, when in an asylum, may be delivered into the custody of a relative or friend if the Committee is satisfied that the application has been approved by the Guardians and that the lunatic will be properly taken care of. The authority liable for their maintenance is to pay to the person taking charge, such allowance not exceeding their cost in the asylum, as the above authority may decide. For every lunatic so boarded out the Guardians will continue entitled to the 4s. a week subvention, and the patient may, by order of two members of the Committee, be at any time brought back to the asylum. While boarded-out, the patient is to be visited quarterly by the medical officer of the Union or district where he resides, and who must report to the Asylum Committee. Patients so boarded-out must continue on the register of the asylum. This clause may prove useful, but the asylum authorities may be put to inconvenience by having to provide accommodation for patients whose beds have been filled up, and which their friends claim in consequence of not having been discharged.

(To be continued.)

INSURRECTION AT THE BICÊTRE.

This remarkable outbreak, an account of which has appeared in the Paris and London papers, deserves some notice in this Journal.

There are in the establishment, separated from the ordinary patients, a number of criminals who are more or less lunatics. These are placed in a quarter called the *Sûreté*, which is a building quite distinct from the rest and surrounded by walls. It contains twenty-four cells and four courts. Above are rooms where the warders or attendants reside. On Sunday, the 25th May, one of the inmates, called Joly, who had demanded another supply of food and was kept waiting, gave the signal of insubordination, and began to break the plates. His companions, five in number, at once followed his example. They invaded the rooms where the attendants were placed and attacked them. One of the latter escaped in order to inform the Director, whilst the others held their own against the invaders. A patient, very strong and dangerous, was conciliatory, and twice endeavoured to induce his comrades to return to the airing courts. It is needless to say that they would not listen to him. The Director was not more fortunate. When Joly saw him he cried out, "Beg pardon, I spare you on account of your wife and children, but you must go down on your knees and ask pardon." When he refused, he threw at him a pot full of earth. A warder wishing to protect him, was himself attacked and seriously bruised. Seeing that it was impossible to maintain the struggle, it was thought better to retreat and abandon the *Sûreté* to the aggressors. They then ascended into the rooms of the warders, smashed the windows, and destroyed all they could lay hands on. The head of the police arrived on the scene and found Joly and his companions astride the first boundary wall, brandishing their knives, razors, and iron bars. When appealed to by the officer of the law Joly promptly replied, "You and your law, I defy. We are outside the law; we are madmen; no one can do anything to us!" Upon this, the head of the police decided to call in the troops. Sixteen men, commanded by an adjutant, were quickly on the spot, bayoneted, and forcing open the door, entered the *Sûreté*. "If you do not give yourselves up, I shall instantly fire on you," exclaimed the adjutant. At the same moment they brought two fire engines and directed a formidable stream of water on to the insurgents, who, after having thrown away their dangerous weapons, came down and allowed themselves to be conducted to their cells, where they were immediately camisoled. The head attendant had his left arm broken, and four other attendants were more or less grievously wounded in the affray.

One of the Paris journals, commenting on the revolt and upon the remark of the patient who said, "No one can say anything to me," observes: "The madmen revolted only against the warders. From the moment the soldiers arrived they quietly submitted to them, and did not attempt any defence. If they had been labouring under an acute attack of insanity, they would not have recognized a distinction, they would have attempted to massacre all and made use of their liberty and power. The truth is that these madmen revolted, having a knowledge of the cause. For what motive? It is this we wish to ascertain. But without special inquiry into the insurrection at the Bicêtre, one may and ought to protest vigorously against the punishment inflicted in this asylum; it is forgotten that the madmen are sick people, and that if society rightfully cares for them, and renders it impossible for them to injure anyone, it is in the wrong when it employs against them such barbarous means as to confine them in cages. It is useless to play upon words, and to call this cage by the name of the *Sûreté*. It is just as much a cage as those which confine the ferocious animals in the *Jardin des Plantes*. The only difference is, that to the wild animals another cage is opened during the day, in which the sun shines, and in which they are able to breathe the open air. At the Bicêtre the patients, shut up in cages, have not this chance, and the rays of spring-time never penetrate

their bars." The writer adds, "I have visited the *Sûreté*, and I have always experienced the same feeling of disgust and shame. It is so completely a place of punishment, and not of safety, in which men are shut up and are punished, whatever may be the character of their cerebral disorder. Pinel or Laségue do not descend from heaven to break these abominable bars, to give proper rooms to the insane—cells, if you wish, but not cages—to cause respect for the grand tradition, which is the honour and glory of French Mental Science."

INTERNATIONAL MEDICO-SCIENTIFIC EXHIBITION, BERLIN, AUGUST, 1890.

In connection with the Tenth International Medical Congress, to be held in Berlin, August 4th-9th, 1890, there will be an International Medico-Scientific Exhibition.

The undersigned Committee of Organization has been authorized, by the representatives of the medical faculties and leading medical societies of the German Empire, to make the preliminary arrangements. We therefore cordially invite all who may wish to exhibit or participate in the above Exhibition; all exhibits, however, to be of a scientific nature.

The exhibits expected will be as follows:—

1. New or improved scientific instruments for biological and special medical purposes, including apparatus for photography and spectral analysis pertaining to medicine.
2. New pharmacological chemical substances and preparations.
3. New pharmaceutical substances and preparations.
4. New food preparations.
5. New or improved instruments for internal and external medicine, and allied specialities including electrotherapy.
6. Plans and models (new) of hospitals, houses for convalescents, disinfection, and general bath-houses.
7. New appliances, such as pertain to nursing the sick, including the methods of transportation and baths for the sick.
8. Apparatus (new) for hygienic purposes.

The Special Committee on "Exhibition" consists of the following gentlemen: Commerzienrath Paul Dörffel, H. Haensch, Director Dr. J. F. Holtz, Director Dr. L. Loewenherz, Regierungsrath Dr. J. Petri, H. Windler, and the Secretary-General of the Committee of Organization. The names of the associate members of the Exhibition Committee, as well as the names of the heads of departments, will be made known shortly; also the conditions for exhibitors.

For applications for exhibits and information please address, Dr. O. Lassar, Secretary-General, Bureau of the Tenth International Medical Congress, Berlin N.W. Carlstrasse No. 19.

Please designate all mail matter relating to the Exhibition, "Exhibition Affairs," and also enclose a visiting card or card of the firm, on which the name and residence is plainly written or printed.

The Bureau is open for the present from 5-7 o'clock p.m.

The Committee of Organization of the Tenth International Medical Congress: Dr. Rudolf Virchow, President; Dr. E. von Bergmann, Dr. E. Leyden, Dr. W. Waldeyer, Vice-Presidents; Dr. O. Lassar, Secretary-General.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE ANNUAL MEETING, 1890.

The Forty-ninth ANNUAL MEETING of the Association will be held on Thursday, July 24th, 1890, at the Royal Asylum, Gartnavel, Glasgow, under the Presidency of DAVID YELLOWLEES, M.D., LL.D.

COUNCIL MEETING, 10 a.m.

GENERAL MEETING, 10.30 a.m.

AFTERNOON MEETING (PRESIDENT'S ADDRESS), 2 p.m.

N.B.—Gartnavel is in the extreme western suburb of Glasgow, but is easily reached by cab, car, or train from Queen Street Station (low level) to Hyndland Station.

A HANDSOME DONATION.—GO THOU AND DO LIKEWISE!

The study of Psychological Medicine has been lately endowed in a most handsome manner.

Dr. Donald Mackintosh, a Member of the Medico-Psychological Association of long standing, has presented £1,000 to the University of Glasgow, and a like sum to St. Mungo's College. At the University the sum has been applied to found an annual Bursary to the value of about £40, while in the College, it takes the form of an endowment of the Lectureship on Mental Diseases.

These munificent gifts are intended to perpetuate the name and memory of the donor's brother, the late Dr. Alexander Mackintosh, formerly physician superintendent of the Glasgow Royal Asylum, Gartnavel.

The Mackintosh Psychological Medicine Bursary is conditioned by the following regulations:—

“That the Bursary be awarded annually to matriculated students who have attended the Lectures on Insanity in the University of Glasgow.

“That it be awarded after examination by the Professor of Medicine and the Lecturer on Insanity acting jointly, and on the condition that the holder of the Bursary shall, while he continues to hold it, devote special attention to the practical study of insanity to the satisfaction of the Faculty of Medicine.”

Correspondence.

THE LONDON COUNTY COUNCIL AND THE PROPOSED ASYLUM.

To The Editors of “THE JOURNAL OF MENTAL SCIENCE.”

GENTLEMEN,—I should like to call your attention to the London County Council's Report on an asylum for curable patients. Mr. Brudenell Carter's ill-will against asylum physicians has led him into an error of reasoning. Dr. Sutherland says that four per cent. of the insane are under medical treatment. Mr. Carter says (p. 20) that assuming 35 per cent. recover, 31 per cent.

recover without medical treatment. As the admissions (say those under a year's residence) are possibly only a fourth of the total number of patients, and as they are the patients who receive by far the most treatment—a healthy dement not requiring it—this four per cent. of the total may represent 12 per cent. of the admissions. As the admissions are treated as they come in and their health brought up to the normal, it may be that, although only 12 per cent. are treated at one time, in the course of a year all may be treated medicinally. This, of course, is merely arguing as Mr. B. Carter argues. As a matter of fact, in the asylum in which I reside, and in other places, almost all the admissions are treated by “constructive” medicine on admission, for a month or longer. The Report is so offensive that the exposure of an error of this kind may do good. The crudeness of the evidence given is really astonishing.

June 17th.

Yours, etc.,
R.

Obituary.

SAMUEL GRIERSON, M.R.C.S., SUPERINTENDENT OF THE ROXBURGH DISTRICT ASYLUM.

Samuel Grierson died at Edinburgh on the 19th April, 1890, the day before his birthday which would have made him sixty-two years of age. His father was a farmer in Kirkcudbrightshire. He worked his way slowly towards the medical profession, and for about five years was assistant to Dr. Hoffman at Margate, after which he went to study in Edinburgh. Here he found a former friend, Thomas Aitken, another Galloway man, the esteemed Superintendent of the Inverness Asylum. They read and worked together, and kept through life a lasting friendship. After taking the diploma of M.R.C.S. in London, Grierson became assistant in the Southern Counties Asylum in Dumfries for about seven years. Of Dr. Gilchrist, the physician of the Crichton Institution, he always talked in the highest terms. In 1867 Dr. Grierson was appointed Superintendent of the District Asylum for Roxburgh, Berwick, and Selkirkshire. At that time patients were lodged in the buildings connected with Millholme House in Musselburgh; but in 1872 they were shifted to the handsome asylum at Melrose, which was built under Dr. Grierson's direction. One might say that Dr. Grierson's character was a fine blend. He was calm and self-reliant, but sympathetic and very kind-hearted. In manner he was stately, courteous, and somewhat retiring. Though he frequently went to Medical Societies, he scarcely ever spoke, and in company he was always willing to let the rest do the talking. It was only when one or two friends were with him that he would take his share in the conversation. Though habitually grave, he had a fine sense of the ludicrous, and when fairly overcome, his laugh was pleasant to hear. To his patients he was always kindly, attentive, and affable; he would pass hours with them, listening patiently, trying to soothe them, or attend to their little requests. He knew all their cases by heart, which, perhaps, was one of the reasons he disliked taking written notes. He often spoke to them in their own Doric—no one knew better the homely force of the Scottish tongue.

Dr. Grierson's main thought was to comfort and relieve his patients. He never looked approvingly upon attempts to do without locked doors, and was never ashamed to use restraint when he thought his patients' safety and welfare really required it. No one who watched his daily life could fail to see that he was the best and kindest of superintendents; but of self-praise, self-assertion, or affectation of any sort, one would detect no trace. Well-read and skilful in general medicine, Grierson was very skilful in the treatment of the insane, and

his prognosis was to be trusted. I once said to him:—"I wonder that you who have seen so much do not write anything for the Psychological Association." His reply was characteristic—

"Well, what do I know that has not been already published again and again?"

"If everyone had your scruples," I said, "we should have few papers."

"That may be," he replied, with a quiet smile.

He was a shrewd observer of character, and his remarks were often very penetrating. Speaking of false, hypocritical men, his scorn came with a flash, and then passed away, as if he hated the subject.

To those under him he was ever considerate; to his medical assistants kind and courteous. During the recess he would find a place for a poor or deserving student as clinical assistant. He was always willing to do his utmost to help anyone who needed it. Dr. Grierson's fondness for smoking was so pronounced that one cannot miss it out in a descriptive sketch. It suited his reflective character. About six years ago the first symptoms of phthisis appeared. The malady went on slowly. In the autumn of 1885 he had inflammation of the elbow-joint of the left arm, which had to be amputated. He spent the winter in Egypt, and on his return in the spring of 1886 he resigned his post of Superintendent, remaining consulting physician to the asylum. He was allowed at first an income of £500 a year; but two years ago the District Lunacy Board, tiring of their liberality, cut off £200 from the annuity, though it was not difficult to see that he could not enjoy it long. Last winter his strength was evidently declining, and he suffered much from weakness and breathlessness; but he remained till the end the same calm, genial, sympathetic man, taking a kindly interest in others, and never complaining about himself. Dr. Grierson was a member of the Episcopal Church; he was a Conservative in politics, but perfectly liberal and tolerant towards the views of others. He leaves a widow, one son, and three daughters.

W. W. IRELAND.

DR. BUTLER, HARTFORD, CON., U.S.A.

The death of this well-known and greatly respected alienist is announced. In our next issue we shall give a memoir of this distinguished physician.

AMERICAN CONGRESS OF MEDICAL JURISPRUDENCE.

A circular has been issued by the Medico-Legal Society of New York announcing a second International Congress of Medical Jurisprudence to be held in New York in 1892. The first was held in 1889.

Two prizes have been offered by the same Society, value 150 dollars each, for the best Essay on a subject connected with Medical Jurisprudence. The papers must be sent in before the 1st of April, 1891, to the President of the Society, 57, Broadway, New York. Competitors must enrol themselves as members of the Medico-Legal Society of New York.

ASSOCIATION EXAMINATIONS.

CONDITIONS AND REGULATIONS RESPECTING THE EXAMINATION
FOR THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

- I. Candidates must be at least 21 years of age.
- II. They must produce a Certificate of having resided in an asylum (affording sufficient opportunity for the study of mental disorders) as Clinical Clerk or Assistant Medical Officer for at least three months, or of having attended a course of Lectures on Insanity and the practise of an asylum (where there is clinical teaching) for a like period, *or they shall give such proofs of experience in Lunacy as shall in the opinion of the President be sufficient.*
- III. They must be Registered under the Medical Act (1858) before the Certificate is actually bestowed.
- IV. The Examination to be held twice a year, at such times as shall be most convenient, in London, Scotland, and Ireland.
- V. The Examination to be written and oral, including the actual examination of insane patients.
- VI. The fee for the Examination to be fixed at £3 3s., to be paid to the Treasurer, for any expenditure incurred, including the Examiners' Fees.
- VII. Candidates failing in the Examination to be allowed to present themselves again at the next and subsequent Examinations on payment of a fee of £1 1s.
- VIII. The Certificate awarded to the successful candidates to be entitled "Certificate in Psychological Medicine of the Medico-Psychological Association of Great Britain and Ireland."
- IX. Candidates intending to present themselves for Examination to give (if possible) Fourteen Days' Notice in writing to either the General Secretary of the Association, the Secretary for Scotland, or the Secretary for Ireland, according as they desire to be examined in England, Scotland, or Ireland.
- X. The Examiners shall be two in number for England and Wales, for Scotland, and for Ireland.
- XI. They shall be appointed annually by the Council of the Association from Members of the Association. They shall not hold office for more than two years in succession.
- XII. Form of Certificate to which the Seal of the Association is to be affixed:—

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Examination for the Certificate in Psychological Medicine.

This is to certify that Mr.....has satisfied the Examiners as to his knowledge of the subjects of the Examination.

Dated

JULY EXAMINATIONS FOR THE CERTIFICATE OF EFFICIENCY IN PSYCHOLOGICAL
MEDICINE, AT BETHLEM HOSPITAL.

Examiners :

DR. BLANDFORD and DR. RAYNER.

I.—PASS EXAMINATION, THURSDAY, JULY 17.

Morning, 11 to 1.

Written Examination in Psychological Medicine. Questions will be asked on the Definition, Classification, Diagnosis, Prognosis, Pathology, and Treatment of Mental Disorders. Also on the main requirements of the Lunacy Law in regard to Medical Certificates and Single Patients.

Afternoon, 2 to 4.

Clinical Examination of Insane Patients. Candidates will be required to fill up Medical Certificates, and to write a short commentary on each case.

FRIDAY, JULY 18.

Morning, 11 to 1.

Vivâ Voce EXAMINATION.

II.—HONOURS EXAMINATION (GASKELL PRIZE).

The Examination will be held at Bethlem Hospital on the 18th and 19th July. It is open to the United Kingdom.

Candidates must pass the Examination for the Certificate, if they have not already done so; must have attained the age of 23, and must have been qualified medical officers in one or more asylums for at least two years.

Candidates must be examined in—1. Healthy and Morbid Histology of the Brain and Spinal Cord. 2. Clinical Cases with Commentaries. 3. Psychology, including the Senses, Intellect, Emotions, and Volition. 4. Written Examination, including Questions on the Diagnosis, Prognosis, Pathology, and Treatment of Mental Diseases, and their Medico-Legal Relations.

Scotch Examination.

JULY 16, 1890.

AT EDINBURGH ROYAL ASYLUM, MORNINGSIDE, AT 10 A.M.

JULY 17.

AT GLASGOW ROYAL ASYLUM, GARTNAVEL, AT 10 A.M.

JULY 22.

AT ABERDEEN ROYAL ASYLUM, AT 10 A.M.

Apply to Dr. Urquhart, Murray Royal Asylum, Perth.

Irish Examination.

Probably in September. Apply to Dr. Conolly Norman, Richmond Asylum, Dublin.

Appointments.

ABBOTT, H. K. B. A., B.Ch., M.D. Dub., Third Assistant Medical Officer to the Hants County Asylum.

ANDERSON, D. H., M.B., C.M. Edin., Assistant Medical Officer to the Dorset County Asylum, Dorchester.

ANDERSON, TEMPEST, B.Sc. Lond., M.D., M.R.C.S., L.S.A., Consulting Physician to the York Lunatic Asylum.

BENHAM, H. A., M.B., C.M. Aberd., L.S.A., Medical Superintendent to the Fishponds Lunatic Asylum.

CONNOLLY, RICHARD M., Clinical Assistant, Richmond (Dublin District) Asylum, Dublin.

EWART, C. T., M.D. Edin., Assistant Medical Officer to the London County Asylum, Colney Hatch.

GREENLEES, T. D., M.B., C.M. Edin., Medical Superintendent to the Grahamstown Asylum, Cape of Good Hope.

GRIFFITHS, ALFRED, M.B., C.M. Edin., Second Assistant Medical Officer to the Kent County Asylum, Barming Heath, Maidstone.

HOLDERNESS, J. C., M.R.C.S., L.R.C.P., Fourth Assistant Medical Officer to the London County Asylum, Hanwell.

MACPHERSON, J. W. CAMPBELL, Fourth Assistant Medical Officer and Pathologist at Wadsley Asylum.

O'FLAHERTY, G. W., L.M., L.R.C.P. Edin., L.S.A., M.R.C.S. Edin., Assistant Medical Officer to the Down District Lunatic Asylum.

PATTERSON, ARTHUR EDWARD, M.B. Aberd., M.P.C., Assistant Medical Officer to the Derby Borough Asylum.

SHAW, H. G., M.R.C.S. Eng., L.R.C.P., L.M. Edin., Fifth Assistant Medical Officer to the London County Asylum.

SKEEN, JAS. H., M.B., C.M. Aberd., Assistant Medical Officer to the Stirling District Asylum, Larbert.

SEWARD, W. J., M.B., M.R.C.S., L.S.A., Medical Superintendent to the London County Asylum, Colney Hatch.

SMYTH, WM. JOHNSON, M.B., C.M. Edin., Senior Assistant Medical Officer to the Kent County Asylum, Barming Heath, Maidstone.

THOMAS, W. J., M.D., M.B., C.M., Fifth Assistant Medical Officer to the London County Asylum, Hanwell.

TOWNSEND, ARTHUR A. W., M.R.C.S. Eng., L.R.C.P. Lond., Junior Assistant Medical Officer to the Barnwood House Hospital for Mental Disorders.

WHITE, G. W., M.B. Lond., M.R.C.P. Lond., Resident Physician and Superintendent City of London Lunatic Asylum, appointed Professor of Psychological Medicine at King's College, London.



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PART 1.—ORIGINAL ARTICLES.

Presidential Address, delivered at the Annual Meeting of the Medico-Psychological Association, held at the Royal Asylum, Gartnavel, Glasgow, July 24, 1890. By D. YELLOWLEES, M.D., LL.D., Physician-Superintendent Glasgow Royal Asylum, and Lecturer on Insanity, Glasgow University.

In ancient times, when superstition was more potent than reason, insanity was deemed a visitation from the gods, and the words and conduct which it prompted were accounted those of the spirit by which the mortal form was possessed.

Less reverent views came as the world grew older, and from being accounted a dwelling-place of the Divine the lunatics were deemed something less than human. A corresponding change took place in the treatment which they experienced. Bereft of man's noblest attribute, the mind, they were regarded as brutes, and were too often treated accordingly. When kindlier and more humane feelings gradually awoke, and the condition was recognized as a disease and not a doom, it was still deemed a disease of mind. Physicians regarded the malady as purely mental, and therefore beyond their reach, and when conjured to banish hallucinations or relieve horrible fears, could only despairingly reply, "Therein the patient must minister to himself."

Long after the malady was deemed within the range of medical science it was regarded and studied only from the mental side, and men spoke of insanity of the emotions, of the intellect, and of the will, without regard to bodily causes or conditions.

The pendulum of progress has now swung to the opposite side. In the pride of pathological research we speak of

nothing but bodily conditions as the cause of mental disorders, and the mind is degraded to the level of a secretion, a little more respectable than bile, because the brain is more complex than the liver, but a mere secretion after all, and only what the brain makes it. The notion that mind can influence brain, as truly as brain influences mind, is laughed to scorn; thought, memory, and emotion are brain cells in action, and nothing more, while the call of duty, and the sense of responsibility, and the power and practice of self-control are the result of certain wonderful organisms which no one ever saw, called "cells of inhibition."

These materialistic views have been strengthened in many minds by the wonderful results already attained by physical investigation of brain function. So much has already been gained that men fondly imagine impossible results to be within our reach. They vainly hope to realize, but more wisely, the dream of phrenology, to assign to every spot of brain its power and province in the region of mind, and to crown the triumph by detecting a delusion in a frozen section of the faulty spot.

I yield to none in admiration of the work done in localizing brain areas connected with physical movements and with special senses, or in appreciation of the practical results thus gained in detecting and relieving local brain disease, but I find nothing to warrant the conclusion that like localization of mental moods or manifestations can ever be possible. Has the most enthusiastic physiologist ever dreamed that he could localize in any spot of brain an all-pervading emotion, like joy, or fear, or hope, or love? Has he hoped to discover the cells which give imagination its wings and memory its sweep, or to find the brain area which generates conscience and the sense of right and wrong? Has morbid anatomy given the faintest shadow of a reason for believing that this dream can ever be realized? Can the necroscopist detect cells of love, of memory, or of conscience? Can he distinguish the brain of a scoundrel from the brain of a Christian hero?—nay, he often cannot distinguish an insane brain from a sane one, so far beyond our knowledge are the nature, the limit, and the areas of brain changes in connection with mind. Localization of mental phenomena seems in their very nature to be impossible, for surely thought and emotion, judgment and self-control are attributes of the mind as a whole, and must be subserved by the whole mental area of brain, in combinations and conditions

of cell activity utterly beyond our ken. That these inscrutable combinations and conditions do somehow condition and limit the manifestations of mind cannot be doubted, and that derangement of such conditions and combinations induces mental disorder is equally certain. But the converse truth, that mental moods and conditions can and do disturb the normal and harmonious action of brain cells, needs equally to be asserted, and has been far more overlooked.

A parent's grief at the death of a child is a natural sorrow which no one would deem inconsistent with mental health, but if the sorrow be unduly pondered, and be indulged by contemplating objects which recall and renew it, it becomes engrossing and habitual, and a groove of thought is established which we recognize as morbid and call melancholia. In other words, a mental mood has grown into a disease, because the mood has created, through constant use and habit, undue activity in certain brain cells, or has relaxed the activity of others. To ascribe the original sorrow to these brain-grooves of perverted or diminished activity would be as reasonable as to deem the ruts in a highway the cause of the traffic which had produced them. Further illustration is easy; a merchant has invested in a speculation which must either make or mar him—success means a fortune, failure means ruin. His great anxiety is natural and well-founded, but after the sudden news of a successful issue, the excitement culminates in temporary mania. A young lady mistakes the affectionate courtesies of a friend for the attentions of a lover, and when undeceived loses all interest in life, and sinks into apathetic stupor. Or a wife misjudges her husband's polite attentions to a lady friend, and broods over the fancied wrong till her life is wrecked by delusions of jealousy and suspicion.

Such cases prove that insanity often begins in mental conditions, which at first may be perfectly sane and normal, but by undue continuance or undue intensity they establish grooves of thought so deep as to create a disturbance or perversion of normal brain activity, which in time becomes truly morbid, and out of which grooves the mind is shunted with a difficulty proportioned to the degree of brain perversion which the mental habit has established.

Such grooves of thought may not originate in mental states, but in bodily conditions, by which the mental moods are prompted; or, again, bodily conditions or disorders may disturb the brain without the intervention of consciousness

or with consciousness utterly perverted. These bodily conditions and disorders may be associated with natural changes in growth, reproduction, and decay, or with morbid conditions in organs other than the brain, and may occasion brain disorder through defective or perverted nutrition, or by what, for want of better knowledge, we call irritation or sympathy.

If it be objected that brains so susceptible to emotions of sorrow, anxiety, love, or jealousy, and so easily moved to extremes, must have been always sensitive and unstable, that is, of course, admitted; but then it is equally true that only sensitive and unstable brains develop the insanity which is awakened by bodily changes or disorders. The objection is merely another way of saying that brains differ inherently in their degree of liability to insanity, and it does not alter the fact that the possible insanity is often awakened from the mental as well as from the bodily side.

When mental causation is traced in so many cases, and when the urgent symptoms in all cases are mental, even where a bodily origin is recognized, it would be strange, indeed, if the medical treatment were not largely from the mental side, and if it did not include such moral guidance and management as would tend to calm excitement, and soothe fears, and assure of safety and help, and if it did not strive by personal influence, surroundings, and occupation to lead the disordered mind back to health again. But it would be utter folly to do all this and to neglect the underlying bodily cause, if such can be discovered or treated, on which the insanity depends, and so the medicinal and the moral treatment must go together, else the patient is culpably maltreated.

These remarks have been suggested by a contribution which has been made to the literature of our speciality since the last annual meeting of the Association, a contribution so unique and important in the views it expresses, the opinions it collates, and the questions it suggests that it deserves our most careful consideration.

It appears in the unpretending form of a report of a Committee of the London County Council, and is addressed to non-professional men, but it is in reality a popular lecture on insanity, an exposure of real and alleged shortcomings in the present asylum system, assurances of the great advantages to the patients and the public which would be secured by placing the insane under the care of the physicians and

surgeons of general hospitals, and a recommendation that a special hospital under this arrangement be established in London. With the object of the Committee in desiring to improve the treatment of the insane and to advance our knowledge of insanity we are all in fullest sympathy, and it is to be regretted that a spirit of antagonism should have been needlessly aroused at the beginning of the movement by the exaggeration of too familiar facts, the presentation of unattainable results, and the implied reproach on professional brethren. This feeling of antagonism should not prevent an unprejudiced consideration of the elaborate report to the London County Council which the movement has produced, and in which the proposals of the committee and the evidence on which they are based are fully stated. It is a document of much interest, and although it misrepresents the facts of the present system, and mistakes the remedy for its failures, it yet may have an important and beneficial influence on the study of insanity and on the treatment of the insane.

The report of the Committee states (I quote the words) "that the suggestion actually submitted to them, is neither more nor less than to place a certain number of the insane under conditions similar to those which have been conducive to progress in the study and treatment of other diseases; that is to say, to subject them to the ordinary influences of a hospital, and to bring the methods, the *personnel*, and the equipment of a hospital to bear upon the study and the cure of the changes which underlie or occasion their insanity. It is not proposed to surrender any of the advantages which an asylum now affords (unless it be those incidental to a rural situation), but simply to supplement them by others of which asylums have hitherto been deprived, or which they have possessed only in an imperfect manner, and which have been proved by experience to be eminently conducive to the advancement of knowledge with regard to the causes of disease, and with regard to the methods by which it may be prevented or cured."

I venture to say that this proposal, as thus expressed, would have received most careful and unbiassed consideration if it had been brought before our speciality in a different manner, with less suggestion of superior wisdom on the part of its advocates, with less implied reproach on their professional brethren, with greater appreciation of the differences which must always exist between an asylum for

the insane and an ordinary hospital, and without the unworthy attempt to awaken popular prejudice, and influence public feeling.

The Committee were instructed "to inquire into, and to report to the Council upon, the advantages which might be expected from the establishment as a complement to the existing asylum system of a hospital with a visiting medical staff for the study and curative treatment of insanity."

The last sentence implies, of course, the reproach that the existing asylum system has neglected or has failed in "the study and curative treatment," and this reproach is abundantly manifest in the report itself. It was not, therefore, to be expected that the leading men in the system thus arraigned would be called in evidence, and of the sixteen eminent physicians and surgeons who were examined as witnesses, only two had any experience as asylum superintendents. Had the leaders of this movement been wiser and less prejudiced, and had they taken into their counsels the leading asylum superintendents, they would have found no men more ready to consider, and to co-operate in, whatever promised to advance the knowledge and improve the treatment of insanity, and certainly none so able to understand the difficulties of new modes of treatment.

The popular lecture on insanity, with which the report is prefaced, explains to the County Council that insanity is "the direct result of material changes affecting the brain, and that in considering insanity with reference to preventive or curative treatment, these material changes are all that need be taken into account." This is illustrated by the very ancient story of the sailor who, when trephined in Haslar Hospital, is alleged to have finished the sentence which was interrupted long previously by a blow on the head during a naval engagement. Drunkenness, rheumatism, and lead colic are supposed to illustrate the occurrence of insanity through changes in the blood. The progress of medical knowledge, the consequent decrease of the death-rate, and the important part which hospitals have borne in improving the treatment of disease are next dwelt on. The Council is then informed that the treatment of insanity has not shared in this great progress, except as regards nursing and environment, and that "the present currency of the word 'lunacy' in daily talk is alone an evidence of how much, in a scientific sense, the ordinary conception of the nature of insanity has lagged behind the conception of the nature of other morbid con-

ditions." The argument from philology, by the way, is not convincing. One might as well say that electricity had made no progress because its name perpetuates the ancient notion that it was the special property of electron or amber.

The Committee inform the Council that the amelioration in the surroundings of the insane has been due to humanity rather than to medical skill, and that from being "shut up in asylums" the insane were "removed from the ordinary scope of medical observation, and from the influence of the progress of medical science." The excuse for this statement is found in the assertion that asylum superintendents are mere administrators or house stewards, and have neither the training, the time, nor the capacity for medical investigation.

This wholesale slander is based on remarkable evidence given by the Lord Chancellor's Visitor, who tells of a youth who had never seen an insane patient being placed in entire charge of one department of an asylum; of a patient who, after four months' residence, did not know who the superintendent was; and of the multifarious duties discharged by himself at the Wakefield Asylum, including signing cheques for £40,000 a year. Surely he did not allege that this was the practice in all asylums, surely his modesty kept him silent about the West Riding Reports, which prove how the medical spirit can triumph over such administrative burdens, and surely he forgot the splendid scientific work done by the present Medical Director at Wakefield in spite of like hindrances.

The mode adopted by the Committee to ascertain the views of asylum physicians was peculiar. Instead of asking evidence from the acknowledged leaders, they sent a series of questions to every asylum superintendent in England and Wales, and to a few others similarly qualified. The Committee anticipated opposition to their proposal, conscious, perhaps, that it had been provoked, and certainly the questions were not framed so as to disarm it, nor does it appear that they were accompanied by any such exact statement of the Committee's proposal as I have just quoted. Nevertheless, out of the sixty-five who replied forty-nine were dissatisfied with the time available and facilities provided for the scientific investigation of disease in asylums, forty-one were dissatisfied with present facilities for individual treatment of patients, twenty-four approved of the proposed

hospital, and seventeen approved with some qualification. These figures sufficiently indicate how willingly our speciality would have considered the scheme had it been more wisely brought forward. Those who objected in whole or in part to the Committee's proposal did so because they deemed moral influence and suitable occupation and surroundings more important than medicinal treatment, or because they believed that the daily visit of outside physicians would be a mistake, or because they were convinced that by the removal of incurable cases to workhouses or to special asylums, and by an increased staff, both lay and medical, the existing system could be made thoroughly satisfactory and efficient. Their views were admirably expressed by Dr. Clifford Albutt, Commissioner in Lunacy. It is significant that his evidence was, "in some sense, a surprise" to the Committee, and led them to ask their witnesses "whether the establishment of the hospital would be conducive to a greater command over the causes of insanity than is now possessed, and that by the application of directly medical agencies."

The London physicians were clear on this point, and Dr. Batty Tuke informed the Committee that by treating the cases on strict hospital principles, and applying himself to the patients instead of to administration, he had obtained over sixty per cent. of recoveries. The allegation that the insane are not sick in the ordinary sense the report explains by saying that the asylum superintendent has not skill enough to detect the sickness. Great scorn is bestowed on the suggestion implied in the word "drugging," but the need for and the blessings to be procured by "medicine out of a bottle" are strongly asserted, for does not calomel banish despondency, and was not Lord Shaftesbury accustomed to say that if people would only "take a little more blue pill there would soon be an appreciable diminution in the gross amount of madness?" The skilled hospital physician is to be the Saviour of the insane.

The report next adverts to the ignorance of medical practitioners on matters connected with insanity, to the present inadequate means for obtaining such knowledge, and to the importance of the proposed hospital as a means of medical education.

It is certainly a scandal that some knowledge of insanity is not a compulsory part of medical education. The power of depriving a fellow-citizen of personal freedom and of

liberty to manage his affairs is by law entrusted to medical practitioners, and yet a man may be licensed to practise who never saw a case of insanity. Among the witnesses examined there were four members of the General Medical Council, one of them being its president, and they testify with one accord as to the great need for such education. Then why, I ask, in the name of our Association, has not the General Medical Council insisted long ago on such education for every student? There is ample material in the public asylums, and at least ten asylums within easy reach of London would welcome a weekly clinique, the systematic lectures being given at the schools. The proposed hospital is to contain only one hundred patients, and would thus be totally inadequate to meet the teaching requirements of London. These one hundred patients are to be cared for by four visiting physicians, who must be on the staff of a general hospital, two resident physicians, who are to work with, though not under, the visiting physicians, a surgeon, an oculist, an aurist, a laryngologist, a gynecologist, and a pathologist. Would it be for their benefit to endure, in addition to all this, the attentions of an eager crowd of students?

The proposed Hospital is to have an out-patient Department as soon as practicable. Such a department would become the haunt of hypochondriacs and malingerers, and could do little or no good to the insane, but it carries out the Hospital idea, and gives the scheme a false air of completeness which may commend it to the ignorant, though benevolent, public. The site of the hospital is to be "in London." Those who deem moral treatment, including occupation and exercise in the fresh air, of great importance, of course prefer a country situation, but the report tells us, with that lofty superiority which is so foreign to true wisdom, that these are "conditions which have unquestionably been shown by experience to be of great advantage in promoting RECOVERY from insanity, but which would not of necessity be equally important with regard to CURE."

The estimated cost of the hospital is £315 per bed, for erecting and furnishing, and £57 10s. per head per annum for maintenance, exclusive of clothing, laundry, and visiting physician's fees. It is recognized that the maintenance rate may run up to £70 or £80 yearly, but that is deemed of little consequence, for the recovery rate is to be raised at least ten

per cent. by the skilled hospital physicians, and as the county of London pays £300,000 annually for its insane poor, there will be a saving of £30,000 a year.

The recovery rate of the proposed hospital should not be ten, but twenty or thirty per cent. above the average, and it is well to discount beforehand the shout of triumph with which this will be announced. It could not be otherwise, and for two reasons :

1st. Only selected cases will be received. The imbecile and the senile, the chronic forms of paralytic or epileptic insanity, the confirmed melancholics and demented will rarely be admitted, and these are the very cases which crowd our asylum wards and lower our percentage of recoveries.

2nd. The hospital standard of recovery is quite different from the asylum standard, and much lower. As soon as the acute symptoms have subsided and he has attained comparative health, the ordinary hospital patient eagerly seeks his discharge, deeming himself recovered, or, as the report would say, "cured." It may be the mere temporary arrest of a disease which is too certain to recur, but for the time the patient is well, and is so regarded. An asylum patient cannot be thus dealt with. The safety and welfare of others are involved in his restoration to freedom and self-guidance, and mere arrest of the disorder would not justify discharge nor warrant the term recovered (we do not pretend to "cure") while there remained a likelihood of its sudden or dangerous reappearance.

The underlying idea of the whole report is that insanity, being an illness, should be treated like other illnesses, that the benefits which a general hospital affords in the cure of a patient and the better knowledge of his disease have been wrongfully withheld from the insane, that asylum physicians have promoted the recovery of the insane, but have quite failed to expound the pathology or accomplish the cure of insanity, and that by the adoption of the hospital system and the skill of hospital physicians the meagre results and the blind gropings of the past will disappear, the number of cures will be greatly increased, and a more exact knowledge of insanity will certainly be obtained.

This idea at once captivates the popular mind which fully recognizes the blessing to humanity and gain to science which a hospital affords, and, in humane pity for the afflicted, desires instantly to extend the same blessing to the insane.

A member of Committee, evidently with the ancient Haslar hospital story still in his mind, expressed surprise that only one consulting surgeon should be required in the proposed hospital, and seemed to imagine that the surgeon would become the good genius of the insane, and would always appear, trephine in hand, ready to drill holes in the skull to let the insanity out.

In considering the recommendations of the Report, it is necessary to remember the inevitable differences between an asylum and a hospital, for they are inherent alike in the conditions of residence, in the malady, and in the treatment.

1. The patients in an asylum do not seek asylum care, and often resent it, but they cannot leave when they wish. They are usually not conscious of illness, cannot co-operate in treatment, and often rebel against it. Even when recovery is unattainable they cannot be dismissed with the sad verdict that nothing more can be done, but must be kept and cared for, even to life's end. Picture a general hospital under like conditions, where every third patient was rebellious, and every incurable case a fixture.

2. The malady, while scientifically an illness, and frequently due to temporary or to hopeless bodily disorder, is often associated with robust bodily health, and often affords—whatever skilled hospital physicians may imagine—not the least pretext for dealing with the patient as with an invalid. The closest scrutiny of organ and function can often detect no bodily ailment; the patient is morbidly depressed by his child's death, or deems his wife unfaithful, or dreads that he will die a beggar; he announces the day of judgment, or sees visions of angels, or interprets the singing of birds as the language of inspiration, but his condition often affords no indication for special medicinal treatment.

3. The medical treatment differs essentially from that of a hospital. It should be *medicinal and addressed to the body* in every case where the closest investigation can discover need for such treatment, or can give hope of benefit from it, but it must in ALL cases be *moral and addressed to the mind*, and must seek, by persistent personal influence and by suitable occupation and environment, to overcome insane habits, banish insane moods and ideas, and restore normal thought and feelings.

The antithesis between "medical" and "moral" treatment, so often repeated in the report, is entirely false. The real contrast is between "medicinal" and "moral," for

medical treatment includes both. Medicinal treatment, when required, is of the utmost value, and no asylum superintendent worthy of the name would neglect it, but as a general rule the influence of sane minds, suitable occupation, and pleasant surroundings, the sense of sympathy, of safety, and of guidance, the power of system, authority and example are more valuable to the insane, and more beneficial by far than the most skilful selection from the pharmacopœia.

There is another antithesis in the report which is, if possible, worse. Asylum physicians are reproached because they have been satisfied to promote the RECOVERY of the insane, but hospital physicians despise this attainment and mean to CURE INSANITY. To the surgeon who removes the physical cause of the disease, the word "cure" may perhaps be permitted, but a wise physician seldom uses it. His function is to help nature to cure, and he is content to be her minister and interpreter.

The question of Visiting Physicians is brought forward in the report as if it were entirely a new departure and of the utmost importance. The Committee utterly ignore the fact that in the principal medical schools of Europe the insane have long been treated in general hospitals and by hospital physicians. Neither in the care nor in the cure of the insane have any special advantages followed from this arrangement, and in neither respect are results equal to our own. The Committee also strangely overlook the fact that in Ireland every public asylum has the advantage, if such it be, of a visiting physician, and that one of their witnesses, Sir John Banks, holds this office now. The report alleges that visiting physicians, where they existed, were either specialists in insanity, and thus no better than the resident physician, or that their function was merely to treat any intercurrent bodily disease; and it thus explains the fruitlessness of their labours. In the case of the Irish visiting physicians these specious excuses cannot be urged. They are not "specialists" in insanity, and they are expressly bound by the Government regulations to see all the new cases, to visit any who are in seclusion or under restraint, and regularly to examine into the mental condition of every patient in the asylum who is under special medical treatment. What is the result? There is no reason to believe that Irish lunatics have benefited vastly by the introduction of outside skill; no striking advance in mental medicine has been achieved by these officers; the medical treatment in Irish asylums is not con-

spicuously better than in those of Great Britain, and the proportion of recoveries is nothing greater.

Sir John Banks evidently deems the medical and scientific work the province of the resident physician, and says he would doubtless do it admirably if relieved of departmental and administrative work. The Wakefield Asylum, according to Dr. Albutt, had an admirable visiting physician for many years, but without any marked advantage to science or treatment, and the same is true of the Aberdeen Asylum. Any noteworthy work in either place was done by the resident superintendent, and not by the visiting physicians, from whom the report expects such great things. In truth, as Dr. Albutt's evidence clearly shows, there is little place for a visiting physician in an ordinary asylum. The majority of the patients require no medicinal treatment, and he can do little to help the moral treatment in an hour's visit. As for scientific investigation, he can accomplish it only through other officers, and he is not more likely to indicate the best directions for it than the resident physician, who dwells among the patients and knows them far better.

The theory that the resident superintendent is to work "with, but not under" the visiting physician *sounds* well, but he must be a young and very sanguine person who imagines that the plan would often *work* well. The position is entirely different from that of the resident physician of a general hospital, whose function it is to carry out the wishes of the visiting physician. Where both are in authority, and in spheres which overlap, friction is inevitable, and the stronger man must rule. The importance of the office to the visiting physician was emphasized by one of the witnesses who, seeing that private asylums must gradually disappear, asked how consultants in insanity were to obtain their experience in future except in such a hospital as that proposed. It is usually the opponents of hospitals who suggest that they exist for the physicians as much as for the patients, but the question shows the foolishness of the rule which debars the superintendents of public asylums throughout the country from consultation practice under proper restrictions. London is not the only place which requires consultants in insanity, and this rule is unfair to the public, as well as unjust to asylum physicians.

Asylum physicians are too well aware that they do not cure half of their patients, and that they often fail to discover the pathology of insanity, but they claim that they

earnestly try, and that the failure results, not from their neglect or incapacity, but from the very nature of the malady. When anatomy and physiology have expounded the structure and function of the healthy brain it will be time enough to reproach the physician with failing to understand and cure their derangement. When these hand-maid sciences defined localities of sensation and movement, medical treatment took immediate advantage of the knowledge. Let them render, if they can, like aid in the mental areas of brain, and we shall then be in a position better to understand insanity, even if like power to heal may not follow.

Asylum physicians also know far better than their critics the defects of the present asylum system. They daily feel the worry of administrative details, the weakness of their medical staff, and the incubus of chronic cases which they cannot get rid of and cannot cure. Administrative work may be a curse by engrossing the time and thought of the superintendent, and hindering his medical work, but it may be a blessing by affording just that relief and change which his medical duties require. No superintendent should be without responsible officers for the three departments of Administration, the Stores, the Workshops, and the Outdoor department, and with such help no superintendent need make administration a burden. It may be true that some superintendents have sunk themselves in such details, and have become purveyors, architects, or farmers, which only proves that they have mistaken their vocation and had better change it. Square men get into round holes in all departments of life.

The medical staff of asylums is almost universally deficient, and especially in two respects. There is too great a gap between the superintendent and his first assistant, on whom the duties of the chief are not sufficiently devolved, and there is so much visiting and recording that there is little time for scientific work. Clinical clerks can aid in visiting and in recording cases, and additional assistants would make research possible for any of the medical officers who desired to undertake it. Scientific instincts cannot be created by giving time and opportunity for their exercise; but certainly time and facilities for such work should be afforded in every asylum, and such work should not be exclusively the province of the pathologist, but of any member of the staff who desired it and was fitted for it.

The accumulation of incurable cases is perhaps the greatest defect of all, for it causes or aggravates all the others. It increases administrative worries, adds to the routine medical work, covers up from observation the new and curable cases, and tends to make the institution a place of residence instead of a place of recovery, a shelter for wrecks instead of a place where vessels are refitted for service. This accumulation has been greatly favoured by the Government grant which leads to patients being sent to asylums who only require care and nursing, and who are incurable from the first.

It was not left to a Committee of the London County Council to reveal these defects in the present asylum system ; they have been too long familiar ; their growth, causes, and remedy have all been discussed, and Cure-Hospitals, such as it now proposes with such an air of novelty, and such an array of witnesses, were recommended long ago, though without a staff of four visiting physicians. I may be allowed to quote what I wrote in 1881 :—

“The history and circumstances of many of our increasing counties or districts, as regards provision for their pauper insane, are unfortunately similar. An asylum is built which seems more than sufficient for all the needs of the district, and for a time it can receive patients from other districts also. Gradually, as each year adds its quota, the incurable cases accumulate. Then the out-district patients are expelled. Then a wing is added here and another there. Then the economic department is found unequal to the unexpected growth of the population, and must be remodelled. Then additional wings are required, until the asylum grows to twice or thrice its original size, is cumbrous and inconvenient in working from the dislocations of its original plan, and is less efficient as a place of cure since individual treatment has become increasingly difficult, and the new cases are easily overlooked amid a multitude of incurables.

“To transfer these incurables to the lunatic wards of a poor-house is no solution of the difficulty. They are thus merely moved from one asylum to another, and either the one building or the other must be enlarged to meet the growing numbers.

“The ‘boarding-out’ plan has been strongly advocated, and has been adopted with some satisfactory success. The incurable patient is discharged from the asylum, and

through the agency of the parish officials, is placed as a boarder either with relatives or in the homes of strangers, being still supported by the parish and under the supervision of the Lunacy Authorities. The fatal defect in this method is its inadequacy to meet the difficulty. While it answers admirably for some patients, there are many more for whom it would be quite unsuitable. It would not be possible to dispose properly and safely of one-half—probably not even of one-third—of the incurable cases in this way, even were it possible to find for them trustworthy guardians and suitable homes.

“All experience seems to prove that every country or district should have two asylums, or rather two types of asylums for its pauper insane. One of these should be distinctly a Hospital, possessing an ample staff of officers and attendants, and fully equipped with all the best means and appliances for the treatment of recent insanity. It should be central, or easily accessible from all parts of the district. It should receive all the new cases as they arise, and should retain only a sufficient number of old cases to give the new comers the necessary example of industry, order, and obedience. Its population should not exceed 250 or 300 at most, so that the utmost possible effort may be made for the restoration of each individual patient. Its chronic cases should be drafted off as they arise to the other and larger asylum. In very large districts several such cure-asylums would be required near the different centres of population.

“The other asylum should be distinctively a Home. It should be situated in a country district, and be surrounded by ample lands for spade cultivation and for milk supply. Its central portion should be fitted for infirm and for excitable patients, and the wings should be a series of blocks capable of almost indefinite extension for the ordinary cases. It should receive no patients except from the cure-asylums. Such a building should be erected at about half the cost per bed of the cure-asylums, and the utmost economy consistent with the welfare of its inmates should be a prominent feature in its administration.

“This plan of providing for the insane poor of a district would secure, I believe, at once the greatest benefit to the patients and the least expense to the ratepayers.”

The real obstacle in the way of providing these two types of asylums is the financial one. It is felt that a very large

capital is already sunk in the existing County Asylums, that far less costly buildings than they are would have sufficed for chronic cases, and that the cure-hospitals to be provided would be more costly still, so asylum visitors have recoiled from the outlay. The County Councils may be bolder, and it is fitting that the London Council, where financial considerations weigh least, should take the first step. May theirs be but the first of many cure-hospitals yet to be established, but on wiser lines than they have laid down. Asylum physicians only need such opportunities to show that they can use them worthily.

I cannot sit down without alluding to the suggestive comment on this report, which is supplied by the annual meeting of our Association to-day. While the report desiderates hospital physicians we have matured and approved a scheme for providing better nurses; and while the report reproaches us with want of scientific spirit, the essays sent in this year from assistant medical officers of asylums are so admirable in the quality and amount of original scientific work, that we have awarded the usual prize of a medal and ten guineas to *two* of them.

The Heating, Ventilation, and Electric Lighting of the Hospital at the Montrose Royal Asylum. By JAMES HOWDEN, M.D., Physician-Superintendent of the Asylum.

In connection with the description of the new hospital in the *Journal of Mental Science* for January, 1889, I have now to add a detailed account of the heating, ventilation, and electric lighting as now completed.

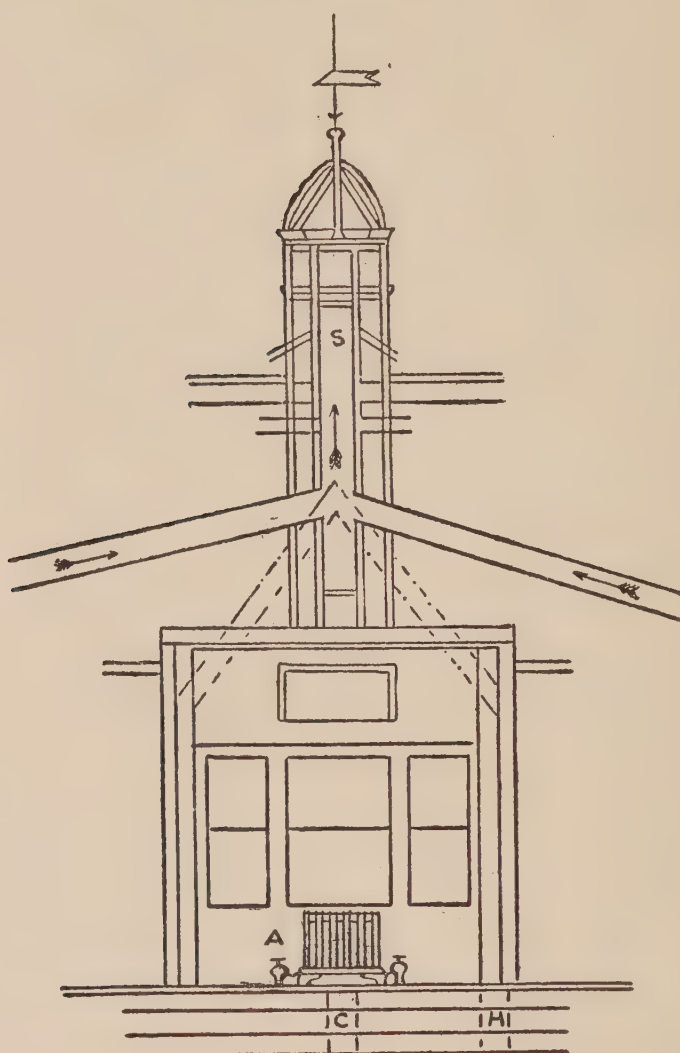
The heating and ventilation are effected by steam on the low pressure principle, by which all the condensed water is returned into the boilers by its own gravity.

There are two steam boilers 14 feet long, by 4 feet 6 inches diameter, placed in an underground chamber outside the main building, working at a pressure of 10 lbs. per square inch, and arranged with a system of valves, by means of which the whole of the heating radiators, ventilating coils, and cooking apparatus can be controlled by the man in charge.

From these boilers main steam and return pipes are carried throughout the various corridors in tunnels 4 feet square under the floor. These tunnels are built of brick,

with concrete floor, and lined on the ceiling with thick inodorous hair-felt.

The main steam pipe from boiler to centre of east wing is 5in. diameter, the other main pipes being 4in. diameter, while the return pipes, which convey the condensed water back to the boilers, are 4in. diameter. From these mains,



- A. 30ft. Radiator, with Valves.
- C. Cold Air Gullet, Grating, &c.
- H. Hot Air Gullet, Grating, &c.
- S. Extract Shaft, with Steam Worm—80ft.
1½in. Pipe in Turret Ventilator.

branch pipes of malleable iron are carried to the various radiators, coils, and tanks in the building, varying in size from 2in. to 1in. diameter, and each radiator or coil has a separate return pipe to convey the condensed water to the nearest return main.

Through six controlling gratings there is provision made for admitting a very large supply of fresh air into the tunnels, and this air, after being heated, can be admitted, as may be wished, to the various corridors and dormitories by gratings near the floor.

The heating is divided into two sections, one section for the heating of the air alone, and the other for the extract ventilation, hot water supply, and steam cooking. The two sections may be worked either separately or together by means of controlling valves near the boilers already mentioned. In the large rooms and corridors there are direct heating radiators of the American pattern, each radiator controlled by valves, which can be turned off or on at pleasure. Care has been taken to have all these radiators placed under the windows, because opposite the glass in windows the temperature is so lowered as to require twenty times more heat than when opposite the same surface of dead wall. Fresh air is admitted behind all the radiators through adjustable gratings fixed in the walls near the floor level.

The single rooms in east and west wings are heated indirectly by the warm air from the tunnels, which contain four rows of 4in. steam pipes; large openings are provided at each end for the admission of cold air, which, after being heated, is conveyed to an opening under the window of each room in channels formed between the joists, and discharged into the room through controlling valves. A separate grating is provided for the admission of cold air to each apartment when desired.

The extraction of the vitiated air is effected by means of steam coils of large heating surface placed in turrets which are fixed on the roof of each ward and corridor, and to which the adjacent smaller rooms are connected by zinc tubes, each room having its own supply of fresh air, cold or warmed, and a separate shaft for the extraction of the foul air. After completion these turret roof ventilators were tested with the anemometer, when it was found that the upward current was so effective that the whole air in the building may be renewed three times each hour though the doors and windows are closed.

In all the lavatories, water closets, and bath rooms there is a separate system of foul air extraction by special turrets with steam coils, and the main lavatories and water closets are heated by warm air from the tunnels in the same way as the single rooms.

Over the east and west wings hot water tanks, heated by steam coils, are placed to supply hot water to the lavatories, portable baths, and ward kitchens. A large steam-heated tank is placed over the east staircase to supply hot water to the large lavatory and sinks on this side of the building, while over the west staircase a similar tank is placed to supply the baths, &c. The supply pipe to the baths is of galvanized iron, 2in. diameter, which enables the baths to be filled quickly. The hot water supply for the kitchen, scullery, officers' lavatories and bath room is from a steam-heated cylinder placed in the kitchen. All the tanks, from which an abundant supply of hot water is at all times available, are arranged to work either separately or together.

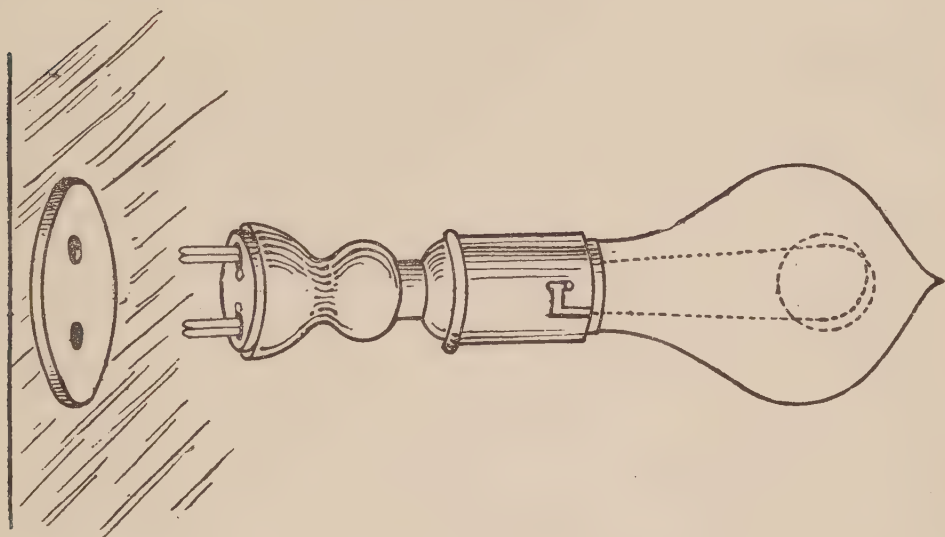
The cooking apparatus, which consists of two steam cooking boilers and a vegetable steamer in three compartments, are supplied with steam from the ventilating boiler.

Near the main building a complete generating plant is placed, from which the current is supplied to the main building, new hospital, and superintendent's house, the latter being about two hundred yards from the main building.

The plant consists of one boiler, two high speed engines, and dynamos, each dynamo being capable of lighting two hundred lights. Accumulators are also provided which will light fifty lamps for ten hours, and are intended to be used when the engines are not running, thus forming a provision against accidental extinctions of the dynamo lights. The current from these cells can also be employed for medical purposes in any part of the asylum or hospital by the intervention of resistances connected with the wires. The boiler is a high pressure locomotive boiler, with a working pressure of 80 lbs. per square inch, and is fitted with self-starting injectors. The engines run at a speed of three hundred revolutions per minute, and drive the dynamos by belts.

The dynamos are shunt-wound Manchester machines, each giving a current of one hundred and thirty ampères at a pressure of one hundred volts when running at about one thousand revolutions per minute. They can be run so as to give a current at one hundred and twenty-five volts pressure for charging the accumulators. The current is led from the machines to a distributing and charging switch board, where it is divided into three main circuits, viz., main building, recreation hall and stage, and new hospital and superintendent's house, a separate circuit being provided for charging the accumulators.

The current for the main building is taken to the centre block, where there is a second distributing board; from this it is led off in ten circuits to the various wards, corridors, and rooms. There are also distributing boards in the recreation hall and stage, and in the new hospital and superintendent's house. By this means the engineer in charge can cut off any ward or room by simply going to the distributing boards without actually going to the ward. All circuits are protected with double pole fuses to provide against fire from the heating of the wires. There are on the installation altogether about four hundred and thirty lights, all of them being sixteen C.P. incandescent lamps. The fittings throughout the whole installation are simple. All the wires are run in accordance with the Phoenix Fire Office rules, and are all enclosed in wooden casing. Care has been taken that the patients can in no way tamper with the wires, and the switches in the wards and corridors are worked with removable keys. Connections have been left in the single rooms and other places where it is not necessary or desirable to have fixed lights, so that at any time a movable lamp can



be inserted in the wall, when the circuit is completed and light obtained. On the stage and in the recreation hall there are upwards of a hundred lamps. The great advantage of the electric light is much appreciated both by the performers and the audience. During an entertainment the hall does not get heated and oppressive, as was the case with gas light. The stage lights are provided with sets of resistances, by which they may be lowered at will. The hall itself

is well lighted by one twenty-light electrolier in the centre, and two ten-light electroliers, one on each side.

In the engine room there is a complete set of measuring instruments, by which the engineer in charge may know how many lamps are lighted, and when to stop or start the second engine.

Sunstroke and Insanity. By THEO. B. HYSLOP, M.D.

The relationship of sunstroke and insanity has received only a comparatively small amount of attention at the hands of medico-psychologists in this and other countries, and our knowledge of the mental defects and aberrations of intellect, met with as sequelæ of an attack of sunstroke, is as yet ill-defined and unsystematized.

Authors resident in hot climates have concerned themselves largely with the study of the effects of a continued high degree of temperature upon the vital processes of man, and we are mostly indebted to them for our knowledge of acute sequelæ, such as ardent fever with acute delirium, remittent and intermittent fevers complicated with dysenteries, hepatic inflammations, congestions, etc.

All observers have experienced the same difficulty in estimating the exact effects of the solar rays, and this difficulty has arisen not only from the absence of a sufficient number of experiments, but by the common presence of other conditions, such as hot, rarefied, and, perhaps, impure air, heat of the body produced by exercise which is not attended by perspiration, and other conditions too numerous to mention.

It would be out of place here to dwell upon the varieties of sunstroke, which have been graphically described by Sir Joseph Fayrer, Duncan, Moore, and others, so for the present I propose to accept the convenient classification of Morache, who divides the forms of sunstroke into two classes, viz. :

(1) Coup de Soleil—due to direct heat of the sun.

(2) Coup de Chaleur—indirectly due to heat and other influences.

Some writers uphold the view that the direct influence of the sun has probably little or nothing to do with the hyperæmia discovered after death, which they consider to be venous in character, and a secondary phenomenon immediately dependent upon a diminished power of activity of

the heart. If this view be correct, the substitution of the term "heat stroke" for the generic term "sunstroke" would be advantageous, and would convey a more accurate notion as to the actual condition.

On the other hand, the assumption that the direct impingement of the sun's rays upon the head may be attended with an active congestion may possibly be true in some cases, but I do not think this is by any means proved apart from the presence of other important factors.

Dr. Handfield Jones, writing upon *Functional Nervous Disorders*, remarks that "any man of experience in the manifold disorders of jaded and exhausted nervous systems will recognize at once how close is the resemblance between the results of tropical heat and those produced by the ordinary causes in operation among the struggling multitude in our large towns," and it is with the factors which aid in producing such exhaustion of the nervous system that I have chiefly now to deal.

The relative values of the atmospheric influences, such as heat, humidity, winds, etc., as causes are interesting, but the bodily causes, such as fatigue, bodily habits, excesses—either alcoholic, dietetic, or sexual—and syphilis are the most important, and have an influence specially upon the general vigour of the constitution; and, in rendering a person more or less susceptible to heat, so far predispose him to suffer from it.

Solar heat as an immediate or exciting cause is said to act in two ways, causing (1) prostration of the nervous powers and syncope, with symptoms of debility, vertigo, weariness, nausea, and incontinence of urine; or (2) venalization of blood, with absence of perspiration, suppression of urine, and constipation. This latter state, however, is chiefly aided by fatigue, impure air, alcohol, disorders of viscera, and retained secretions; and, further, although the heat of the sun may possibly affect the vaso-motor centre in the medulla oblongata, especially by striking on the unguarded occiput and neck, yet the same symptoms arise when there is no direct influence of the sun upon the person attacked.

The recognition of this fact is important to us, as formerly many cases were not returned in India, but were overlooked owing to the fact that only those cases occurring after direct exposure to the sun were recorded; and, moreover, when we investigate the previous histories of our cases of insanity this source of error is always open to us.

Undoubtedly hot climates eventually sap the foundations of life amongst Europeans, and although the hypothesis of acclimatization, *i.e.*, "that an injurious effect is first produced and then accommodation of the body to the new condition within a limited time," is to a certain extent true, yet the rule does not extend in its application from the individual to the progeny.

It appears that acclimatization of Europeans in India depends largely upon intermixing by marriage with the natives, otherwise they are apt to degenerate into strumous or nervous types, and fail to reach beyond the third or fourth generation.

The effects of a tropical climate are, so to speak, relative; and beyond the influences of fatigue, over-exertion, overcrowding, bad ventilation, unsuitable dress, retained excretions, defective secretions, unsuitable diets, etc., we have to consider malaria, syphilis, and alcohol, all of which tend to debilitate or contaminate the system, and predispose the individual to the occurrence of sunstroke. From literature, and a limited experience gained by an analysis of 55 cases of insanity following sunstroke, I have been led to the belief that India is, perhaps, the country most productive of that affection amongst Europeans, for no less than 23 of the cases were said to have occurred there. In eight cases there was a history of malaria, and in five of syphilis, whilst any tendency to alcoholism could only be traced in seven of the 55 cases. What the relationship of malaria and syphilis is to sunstroke I am not prepared to say. Undoubtedly syphilis (as first pointed out by Mr. Hutchinson) precedes attacks of sunstroke. Possibly the special and primary syphilitic brain lesions affecting the meninges or vessels, or encephalic nervous substance, may predispose to heat-stroke by weakening the resistive power of the organism and brain, particularly to the effects of heat; but this is mere supposition on my part, and much information is yet wanted before we can assign to syphilis a definite part in the etiology.

Alcohol especially predisposes to the indirect form of heat-stroke, and, as before stated, is a powerfully co-operating aid to the external and bodily causes, but possibly some observers tend to give this agent too great a prominence as a factor.

With these brief general considerations as to the etiology, I will now pass on to what is to us the more important part

of the subject. The most abiding results of sunstroke are all referable to impaired functional energy of the cerebro-spinal system, and this impairment shows itself either in motor paralysis, sensory paralysis of common or special sensation, hyper- and dysæsthesiæ of the nerves of common and special sensation, in debility, and undue excitability of the emotional centres, and in similar states of the cerebral hemispheres and spinal cord; or more commonly in some nervous defect or perversion consisting in a functional paralysis of one or more of the great nerve centres. In addition to these, the extreme sensitiveness of a patient to the rays of the sun, or to excessive heat ever afterwards, and the effect exercised upon them by alcohol all point, according to Sir Joseph Fayrer, to an unstable condition of the great vaso-motor centre in the medulla oblongata.

The same author states that undoubtedly an attack of insolation is often attended with meningitis, or cerebral changes, which may destroy life or intellect sooner or later, or permanently compromise the whole health or that of some important function.

The mental sequelæ are interesting, and of the syncopal, asphyxial, and hyperpyrexial forms of sunstroke, the two latter appear to be the most important and dangerous.

In many cases the sequelæ may be attributed to the injury which the brain has received during the primary attack, and in the case of the syncopal variety, the temporary loss of nutrition of the brain may result in mental or even physical weakness, which may continue through life.

In infancy heatstroke is certainly a cause of accidental idiocy or imbecility. Dr. Langdon Down states that he has seen a notable number of feeble-minded children, who owe their disaster to sunstroke, while making the passage of the Red Sea and Suez Canal *en route* from India; or from exposure in that country, and he attributes the mental decadence as originating without doubt from the actual exposure to heat. Dr. Shuttleworth has kindly allowed me to copy the records of six cases of imbecility following sunstroke admitted to the Royal Albert Asylum at Lancaster. The parents of idiots and imbeciles are extremely ready to attribute the mental affections of their children to accidental causes; but in these cases the non-existence of hereditary neuroses, the absence of fits and other diseases or accidents likely to have been the cause, as well as the nature, extent, and immediate consequence of the attack of sunstroke, aided

me in a great measure in coming to the conclusion that the damage to the mental power was undoubtedly dependent upon sunstroke.

The amount of injury to the mental powers was variable, but all the patients were simple-minded or imbecile, rather than belonging to the lower grades of idiocy.

Sometimes the mental symptoms are found intercurrent with the sopor and coma following the shock, and they may then take the form of delirium or excitement with hallucinations, passing into a condition somewhat similar to that of primary dementia. As a general rule, however, although there may be some trace left of the primary injury to the brain, the progress of the case is more favourable than when the psychosis develops some months, or even years, after the injury. In children, as in adults, the neuroses following sunstroke are somewhat similar to, and have much in common with, the traumatic neuroses. In none of the six cases was there any hereditary, neurotic, or strumous taint, and, moreover, until the period of the actual attacks of sunstroke nothing abnormal or defective had been detected by the parents.

The chief clinical features noted were:—

- (1) The ordinary aspect of the child, with absence of bodily deformities.
- (2) The full development and comparatively normal dimension of the muscular and osseous systems (including the shape of the head, jaws, and teeth, &c.)
- (3) The absence of any physical defects or affections of the nervous system, such as paralysis or chorea.
- (4) The good use of all the special organs of sense, and absence of illusions or hallucinations.
- (5) The special affections of speech, either of a temporary character immediately following the attack, or as a continued impairment or failure in development of the faculty.
- (6) The frequency of the occurrence of fits immediately after the attacks, lasting for a short period but not continued through life.
- (7) The limited or perverted moral state as seen in various grades, from mere disobedience to propensities peculiar, dangerous, or even homicidal, and sometimes, though rarely, habits of a degraded nature.
- (8) The small mental capacity, with failure to improve much by the ordinary educational methods.

- (9) The attachments, antipathies, and peculiarities which were in most cases retained through life ; their absolute inability to compete with their fellow beings, and their mental unfitness to aid in their own survival.

EPILEPSY is one of the most common of the sequelæ of sunstroke, and occurs in various degrees of severity, from slight epileptiform convulsions to the severest forms of the disease. Maclean, writing upon diseases of tropical climates, states that immense numbers of soldiers were invalided home from India for this affection following sunstroke, but in a large proportion of cases the attacks disappeared before arrival at Netley, particularly in the long voyage round the Cape of Good Hope.

As a rule the disease appeared to be amenable to treatment. The same author also noted a few examples of chorea-like movements of the muscles of the forearm and hands, probably due to nerve irritation.

Dr. Mickle is inclined to the belief that the apoplectiform seizure or the epileptiform *petit mal* of general paralysis has been mistaken for sunstroke. While acknowledging that such an error may possibly occur, my limited experience has taught me that it is more common for the sequelæ of sunstroke to be mistaken for general paralysis.

The frequent occurrence of epilepsy is suggestive, and as in the cases of the periodical psychoses, the disorder seems to be a manifestation of an unstable vaso-motor state.

Both idiocy and imbecility may be dependent upon early epilepsy, but the absence of spastic contractures, oculomotor anomalies, deformities and other conditions, together with the absence of progressive mental deterioration associated with the occurrence of the convulsions, is suggestive rather of an acquired psychosis ; and further, in cases of epilepsy following upon sunstroke, the mental defect and convulsions appear to be collateral phenomena, both depending upon a common cause, whilst the positive signs of alienism, such as anomalies of character and moral perversions with defective or one-sided development of special faculties, appear to be, in a large measure, different from the progressive deterioration of ordinary idiopathic or hereditary epilepsy.

In adults I have seen the occurrence of episodic attacks somewhat analogous to epilepsy in which there was a periodical attack of depression or excitement, or even conditions closely resembling the epileptiform and apoplectiform attacks of paretic dementia.

Insanity arising from sunstroke is much like that due to traumatism, but as a rule progressive deterioration terminating in dementia is far more common in the latter than in the former. An attack of sunstroke seems to form an acquired predisposition to insanity, and, as in the case of traumatism, the most serious psychoses are developed months or even years after the injury.

Dr. Clouston believes that few Englishmen become insane in hot climates in whom sunstroke is not assigned as the cause, and that that cause gets the credit of far more insanity than it produces. At the Morningside Royal Asylum only 12 cases were admitted in nine years which could be said to have been due to traumatism or sunstroke, being only one-third per cent. of the admissions.

In the case of Bethlem the percentage is much higher, for of 1,947 admissions no less than 49 (or 2·6 per cent.) were attributed to sunstroke. Possibly this high percentage may have been due to the admission of large numbers of officers and others who have seen foreign service.

Dr. Mickle believes that sunstroke is not uncommonly a cause of general paralysis among British soldiers in India, and he quotes the authority of Meyer, Victor, Berstens, and others. On careful analysis of the aforesaid 49 cases, I have only been able to find one case in which general paralysis really existed, whereas the number that simulated that disease was remarkable. The symptoms in fourteen cases consisted in associated mental and physical defects, which rendered the differential diagnosis one of extreme difficulty. The physical symptoms consisted in tongue tremors, thickness or slurring of speech, pupillar anomalies, altered reflexes (chiefly exaggerated), shaky and interrupted handwriting, tottering or weak gait, loss of control over bladder and rectum, hallucinations, or perversion of all or some of the senses (that of smell least commonly), and mental conditions, such as melancholia or hypochondriasis, but more commonly exaltation, extravagance, excitement, or even acute mania. With such a combination of symptoms the diagnosis of general paralysis appeared to be warrantable, but the cases proved deceptive, for after a time the physical signs disappeared, and the patient recovered mentally; or the mental health remained in a weak or permanently impaired condition, as shown by some irrelevancy or inattentiveness; or more commonly by some trace of exaltation or fixed delusions, with a smiling, self-satisfied manner.

Such patients become docile, cheerful, tractable, and industrious, and are perhaps in a condition to resume work, and so they may go on for years, with no motor or special sensory disturbances, and no marked change mentally from year to year.

A very common symptom is cephalalgia, which may occur periodically or persistently, and is probably dependent upon chronic meningitis, with some thickening or opacity of the membranes. Such patients cannot tolerate heat, and a close or heated atmosphere will cause an exacerbation of the sensory symptoms, or even recurrence of the mental disturbance. Alcohol is apt to aggravate the symptoms, and although possibly in some cases it has played a considerable part in the production of the insanity, yet I believe it is far more effective as a cause in cases where the brain has been previously rendered weak by sunstroke, for in many cases the primary affection or attack of sunstroke has not been preceded by alcoholic excesses, and, moreover, has not been followed by any immediate mental or motor defect, but it has formed, nevertheless, a predisposition to the disastrous effects of other exciting causes, such as alcohol.

The symptoms arising from locomotor ataxia, various paralyses (either general or circumscribed), epilepsy, senile dementia, and many other conditions may, in some particulars, render the diagnosis difficult, but the greatest difficulty is experienced with such affections as (1) General paralysis; (2) Syphilitic disease of the brain and membranes; (3) Alcoholic insanity; (4) Dementia, with paralysis from local lesions, or circumscribed brain lesions, with dementia and paralysis (from softening, hæmorrhage, embolism, and thrombosis).

It is not my intention to discuss the differential diagnosis of these affections, for there are few motor, sensory, or psychical elements which can be said to be symptomological of sunstroke.

It is rather by the history, the combination and character of the symptoms, and the subsequent course of the case, that we are able to define a group within which the cases have some common characteristics; and, moreover, the possession of this knowledge may materially guard us in giving our prognosis, and aid in the course of treatment pursued.

The pathology of the affection is somewhat indefinite. Many writers uphold the view that exposure of the uncovered head to the scorching rays of the sun may give rise to puru-

lent meningitis; but the question may be asked, "Why, when so many people are exposed to the injurious influences, so few suffer from it?" The difficulty in answering this question is increased by the want of a satisfactory physical explanation of the fact.

Obernier has endeavoured to show, by both clinical and experimental observations, that the causes and nature of sunstroke are to be sought in the abnormal increase of temperature in the body; and Liebermeister has further shown that the cerebral symptoms associated with high temperatures are only to a limited degree, if at all, dependent upon cerebral hyperæmia. Sufficient facts are not yet established to justify any decided opinion as to the pathology. Experiments have shown that moderate heat directed upon the cranium causes dilatation of the vessels, and we must conclude that the initial congestion of sunstroke is due in part to heat, and—with due regard to the authority of Liebermeister—there is some probability that at the onset of the symptoms there is some hyperæmia of the pia and brain, or, more accurately speaking, a distension of the whole venous system, and the changes found after death may further assume the existence of a cerebral congestion similar to the congestion found in other organs. Buck is of opinion that a tendency to capillary stasis is induced—the heart labours to overcome the obstruction, and, failing, gives us the syncopal or cardiac variety; or the nervous system, resenting the increased abnormality of the circulation, develops convulsions and coma, as the cerebro-spinal variety of the disease.

The post-mortem appearances vary in the different forms of the disease. In ardent fever, serous effusions in the ventricles and between the membranes of the brain have been noted, with turgescence of vessels, and congestion of the pulmonary system. The cause of death is said to be most commonly asphyxia, and not apoplexy, and the most important changes are found in connection with the thoracic viscera.

When the medulla is affected accumulation of blood takes place in the right side of the heart and lungs, with secondarily (as a consequence) a want of that fluid duly arterialized in the brain. Roth and Lex state that death in the majority of cases occurs from cardiac paralysis, and only occasionally from cerebral disturbance. Arndt speaks vaguely of a "diffuse encephalitis," as explaining the

cerebral symptoms, which often remain after the acute attack; and he points out that during an attack of sun-stroke the blood is acid, very rich in urea and white globules, and shows very little tendency to coagulation. Köster and Fox have called attention to the occurrence of hæmorrhages, separation and destruction of the nerve fibres, and extravasation in both vagi and phrenic nerves.

In children, Dr. Shuttleworth has found meningitis, with effusion and traces of old-standing disease of the membranes in one case, and in another the membranes were thickened and somewhat opaque, especially at the vertex.

In the adult I found in one case marked opacity of the arachnoid, with an excess of serous fluid between the convolutions and in the ventricles. The dura mater was apparently normal, and not adherent to the skull cap. The inner membranes stripped readily, and in one coherent film, leaving the surface of the convolutions intact. The vessels at the base were healthy, and normal in arrangement. There was no marked congestion of the venous system. The convolutions themselves were well formed, and the cortex was of good depth and colour. Striation, however, was ill defined, and there was a considerable amount of œdema of the white substance. On microscopic examination of the cortex cerebri I found a considerable number of spider cells and other evidences of degeneration.

In another case, reported to the Medico-Psychological Association by Dr. R. Percy Smith, the dura mater was found normal, but there was great excess of sub-arachnoid fluid over the surface of the brain, especially at the upper ends of the ascending frontal and parietal convolutions. The pia mater was soft, but peeled readily from the upper surface of the brain, leaving the convolutions intact. The convolutions were somewhat wasted, and the arteries at the base were slightly atheromatous. On section, the grey matter was pale and ill-defined, especially over the whole of the frontal region, and the left lateral ventricle was dilated. The condition of the spinal cord was interesting—the dura mater being distended by fluid in its lower parts, whilst along the cervical and dorsal regions there were numerous hæmorrhagic patches on its outer surface, consisting principally of clotted blood lying in the meshes of thin gelatinous material.

In the lower cervical region the anterior surface of the dura mater was adherent to the posterior surface of the

bodies of three cervical vertebræ by old firm adhesions. No compression of the cord or caries of bone could be detected, and the spinal cord itself was firm and healthy, and did not show any signs of degeneration. Köster has described a hyperæmic condition of the brain, and the occurrence of several small ecchymoses under the peri- and sub-cardium of the left ventricle in a case of death from sunstroke; but he has also described similar results found in the case of a syphilitic woman where excessive increase of temperature could not have been the cause of death; and he further calls attention to the possible occurrence of disturbances of the vaso-motor and respiratory nerve-centres, which must take place in a pronounced form in patients suffering from sunstroke. In the only other case which I have to report the dura mater was found normal, but the veins of the pia mater were deeply congested and full of dark coloured blood. The inner membranes peeled readily, and left the convolutions intact. There was slight excess of sub-arachnoid fluid, and the white substance of the brain was œdematous; otherwise, beyond considerable injection of the choroid plexus, the brain appeared to be fairly healthy. Both lungs were deeply congested.

*An Inquiry into the Blood and Urine of the Insane.** By W. JOHNSON SMYTH, M.D., Senior Assistant Medical Officer, Kent County Asylum, Barming Heath.

The brain is, in man, the material substratum of mind. Professor Huxley teaches that mind is as much a function of matter as motion is. However this may be, certain it is that mental processes can be altered or even arrested by artificially altering the physical condition of the brain.

We can arrest cerebation by a number of drugs too numerous to enumerate. We can slow cerebation, or we can pervert it: Alcohol, cannabine, and absinthe may produce actual delusions with or without excitement.

The man of vigour is rarely anæmic; the anæmic are invariably not those of intellectual vigour.

Considerations such as these suggest the question, "What is the condition of the blood of the insane?" To supply the answer is a matter of no little difficulty, since a vast amount of work must be undertaken.

* Two essays, those of Dr. Johnson Smyth and of Dr. Mackenzie, were adjudged equal and deserving of the medal and prize of the Association. Not having space for both, we print that of Dr. Johnson Smyth, which came first to hand.—EDS.

I have spent much time in investigating in this field of study, and feel convinced that a study of the blood of the insane during life is of infinitely more value than any study of post-mortem conditions—which after all only represent the ruins consequent on the casual factors.

The evidences which I shall adduce, with the object of proving that the blood of the insane is diseased, consists of:—

I.—Presumptive Evidence.

II.—Direct Evidence; and

III.—Indirect Evidence.

I.—I shall not go into detail as regards those well recognized conditions which I venture to call presumptive evidence of a morbid condition of the blood; but I must note that in insane conditions dyspepsia, hepatic and intestinal troubles are common; and if the organs so intimately concerned with the regulation of the quantity and quality of the blood are diseased, may we not surmise that diseased conditions of the blood are very probable? Further, how account for the profuse sweats of general paralysis, the rapidity with which the wounds of epileptics heal, their oily skin, and peculiar odour, if there is not some profound blood derangement? Space alone prevents me from mentioning many other facts all tending to point to a pathological condition of the blood of the insane.

II.—Direct Evidence.—I shall first state that my inquiry as regards the direct examination of the blood consisted in the examination of the percentage of hæmoglobin, the number of red blood corpuscles, and the specific gravity. I made some observations on the alkalinity of the blood, but as these were not carried out completely to my liking, I shall once more go into this phase of the study with, I trust, very interesting results.

The observations were all made with the consent of the patients; they were all male patients. No acute cases were examined where there could have been any fallacy resulting from excitement or fasting. No satisfactory work could be done in cases of sub-acute mania. The observations were made on—

I.—Sub-acute cases of Melancholia.

II.—(a) Epileptics during freedom from fits.

(b) Epileptics during or immediately after fits.

(c) Three “test cases” of epilepsy, the examinations

having been made daily for thirteen days on a mixed diet, and for twenty days on a fixed diet.

III.—Cases of General Paralysis.

IV.—Cases of Secondary Dementia.

I also examined the blood of a few idiots and of a few imbeciles.

The examination in these latter cases were too few to warrant one in basing conclusions on the work done; besides, these patients could render no assistance in completing the inquiry, viz., collecting their urine. The hæmoglobin was estimated, and the enumeration of the corpuscles was carried out by Gowers' instruments as supplied by Mr. T. Hawksley, 357, Oxford Street.

The specific gravity was ascertained by using an apparatus which I made in conjunction with Mr. Hawksley, and the principle of which was first indicated by Professor Roy, of Cambridge.

Professor Roy prepared standard solutions of glycerine mixed with aq. destil. and mercuric perchloride.

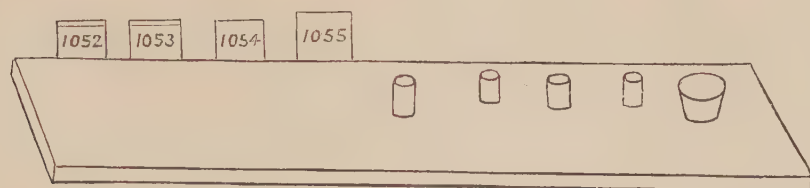
He filled a syringe with a solution, say, of a density 1055, he then sucked a drop of blood into the syringe and observed its behaviour in the standard solution. If it rose the blood was lighter, if it sank, heavier than the solution used, but if it remained stationary it was assumed to be of a density identical with the solution used. I should have added that the needle of Professor Roy's syringe projected for some distance into the barrel of the syringe, so as to place the drop as near as possible in the middle of the solution.

For carrying out an extensive inquiry this apparatus would fall far short of the requirements.

We should often have to fill the syringe with fresh solution, and, even though we used a series of syringes, the fallacy of acquired momentum to the blood during suction would be present with misleading results.

To obviate these difficulties I have fixed on a wooden base 2ft. 6in. long, $4\frac{1}{2}$ in. wide, and 1in. in thickness, a series of glass cups $1\frac{1}{2}$ in. deep and $\frac{3}{4}$ in. in diameter. The edge of the base opposite the operator I have bevelled; along this bevelled edge runs a groove $\frac{1}{16}$ in width for holding cards with numbers written thereon corresponding to the solutions in the cups. To the right hand side of the series of cups is a small glass dish fixed, and intended for washing pipettes.

The accompanying sketch conveys some idea of the simple apparatus.



To the left are seen four cards, to the right four cups and dish *in situ*. With extremely delicate pipettes the blood is placed in the middle of one cup filled with the standard solution; its behaviour observed, then if necessary the blood is watched in other cups till a cup is reached in which the blood remains stationary.

To eliminate momentum the pipettes have their tips bent at right angles to the stem, so that the blood is forced out in a horizontal direction.

Standard solutions are supplied by Mr. Hawksley, but I prepared those I used with hydrometers made by Mr. Hawksley, and certified at Kew Royal Observatory. Fresh solutions were always used; all observations were made between the hours of twelve and two p.m. at a temperature of 60° F.

For very delicate observations no method at present known to physiologists can rival that described, but I propose another method, which is simpler, and gives tolerably accurate results. I have made many observations by this method, and they confirm in the main the results obtained by Roy's method.

Take a known volume of distilled water (Sp. Gr. 1000); weigh it in a chemical balance; now weigh a corresponding volume of the blood to be examined, and a simple calculation brings out the required results.

Pipettes containing a volume of 200 c.m. suffice.

For purposes of comparison I have made a series of 15 examinations of the blood of men in ordinary health, of average weight, and between the ages of 23 and 50 years. The average of the results were:—

Hæmoglobin, 93 per cent.

Red blood corpuscles, 5,106,000 per cubic millimetre.

Specific gravity, 1056.

I shall now proceed to give tables setting forth the results of my observations on the blood of the insane, commencing

with melancholia. I state the ages and weights of the patients.

TABLE I.—Observations on the Blood in Melancholia.

No.	Age.	Weight.	Hæmoglobin percentage.	Number of Red Blood Corpuscles.	Sp. Gravity.
	Years.	st. lb.			
1	61	10 7	80	4,960,000	1056
2	29	8 11	77	4,720,000	1058
3	38	10 12	65	4,060,000	1058
4	34	9 2	72	4,820,000	1056
5	50	10 11	60	5,300,000	1057
6	43	9 8	70	4,650,000	1058
7	45	10 8	70	4,240,000	1057
8	36	9 1	65	4,480,000	1057
9	39	10 5	68	4,920,000	1058
10	50	9 2	70	4,690,000	1057
AVERAGES			69 7-10	4,684,000	1057 1-5

These results indicate a small variation from the condition of the blood in health as regards the specific gravity. They show, however, that while the great weight-giving constituent of the blood, viz., hæmoglobin, is deficient—that while the number of red corpuscles is diminished—the specific gravity of the blood is not only sustained, but is actually above the average found in men in ordinary health. That is to say, that in melancholia the blood-plasma is abnormally dense. I shall show that the plasma is almost equally dense in epilepsy, denser in secondary dementia and in general paralysis of the insane; that the density actually varies in the former disease, becoming denser as the epileptic seizures occur. So far as my observations go, I find that the variations from the normal are least in melancholia, so far as the density is concerned. I shall now give a table setting forth the results of observations carried on over a long period in cases of epilepsy. The observations were made (*a*) during freedom from fits, (*b*) during or immediately after the fits. In no case did I consider the patient in a state of freedom from fits unless he was free from them for five days before and five days after the observation. This was with a view of eliminating as far as possible any disturbed conditions

which might possibly have been associated with the convulsions. It entailed a very protracted series of observations.

I made observations on 50 cases of epilepsy, none of which were suffering from any other disease. In all cases I

TABLE II.—The Observations in Epilepsy.

No.	Age.	Weight.	Hæmoglobin Percentage.	Number of Red Corpuscles.	Specific Gravity.	
					During freedom from fits.	During fits.
	Years.	st. lb.				
1	20	8 12	60	4,560,000	1052	1055
2	20	9 6	60	5,160,000	1056	1062
3	40	9 12	60	4,260,000	1055	1056
4	32	10 6	55	4,600,000	1055	1058
5	19	10 3	65	5,270,000	1055	1057
6	24	11 10	60	4,760,000	1059	1060
7	36	11 1	70	4,860,000	1060	1060
8	50	11 10	74	4,480,000	1060	1066
9	43	11 4	65	3,500,000	1059	1060
10	81	13 2	55	4,680,000	1059	1059
11	62	12 8	60	4,090,000	1057	1059
12	60	10 7	60	3,610,000	1058	1060
13	43	12 12	55	3,550,000	1056	1057
14	47	10 0	61	3,300,000	1051	1057
15	20	9 11	52	3,760,000	1057	1061
16	42	10 5	55	3,550,000	1058	1063
17	55	11 9	60	4,070,000	1060	1060
18	59	11 3	55	4,360,000	1059	1061
19	52	11 0	50	5,310,000	1058	
20	51	11 6	55	4,470,000	1061	1064
21	47	12 10	65	4,820,000	1058	1062
22	57	11 7	65	3,810,000	1052	1058
23	38	10 5	68	4,640,000	1053	1057
24	21	10 2	45	4,050,000	1049	1050
25	36	12 3	72	4,930,000	1059	1063
26	29	10 11	60	4,180,000	1054	
27	23	11 7	60	4,960,000	1058	
28	41	10 2	62	4,500,000	1052	1062
29	38	10 6	60	5,940,000	1059	1062
30	25	11 3	65	5,580,000	1060	1060
31	26	9 10	68	5,040,000	1056	1058
32	23	11 5	65	4,900,000	1055	1058
33	27	9 4	60	4,940,000	1055	1057
34	41	10 2	75	5,130,000	1058	1061
35	41	11 3	75	4,630,000	1061	1062
36	41	13 8	70	4,260,000	1056	1060
37	38	9 8	58	4,710,000	1054	1058
38	42	11 4	71	4,740,000	1070	1072
39	35	8 0	70	3,850,000	1058	1060
40	27	8 4	60	3,290,000	1058	1058
41	32	11 8	75	4,130,000	1057	1060
42	20	10 6	60	5,230,000	1057	1060
43	23	11 0	70	4,100,000	1055	1057
44	25	8 2	70	4,640,000	1057	1062
45	22	10 2	62	4,430,000	1054	1058
46	20	10 10	70	5,230,000	1057	1062
47	20	8 10	75	5,650,000	1057	1058
48	25	9 2	60	4,340,000	1060	1058
49	36	11 3	63	4,630,000	1056	1059
50	38	10 8	60	4,560,000	1053	1058
AVERAGES ...			62 $\frac{23}{25}$	4,520,800	1056 $\frac{43}{50}$	1059 $\frac{32}{47}$

estimated the amount of hæmoglobin and red blood corpuscles during freedom from fits, and I did the same in many cases during fits, but as I found no variation whatever I shall only state the results during freedom from fits.

The results of the observations seem somewhat remarkable. I was unable to make the double observation in cases numbered 19, 26, 27, as the men had no epileptic seizures in time for me to take advantage of them. There was absolutely no difference in the specific gravity of the blood during a state of freedom from fits and during the seizures in cases numbered 7, 10, 17, and 40. These cases stand out in awkward contrast against every other instance where the observations were completed, for there undoubtedly I found a distinct increase in the density of the blood associated with the convulsive periods. I confess I was disappointed at finding the exceptions to what seemed the general rule. But the exceptions did occur, and I make no attempt to conceal them, feeling sure that some unknown cause must have accounted for them.

It occurred to me that some circumstances connected with the diet of the patients may have interfered, and so account for the anomalies, as I considered them. I therefore selected three epileptic patients differing in age, weight, degree of suffering from fits and temperament. I had them fed on a precisely similar mixed diet for 13 days, and on a fixed diet for 20 days. Daily, Sundays excepted, I made careful observations in each case and found that the density of the blood increased during the fits or during excitement—which, according to some, often displaces an epileptic storm. The chart indicates the results in a graphic form. The figures to the left indicate degrees of density, those on the top line the dates of observations.

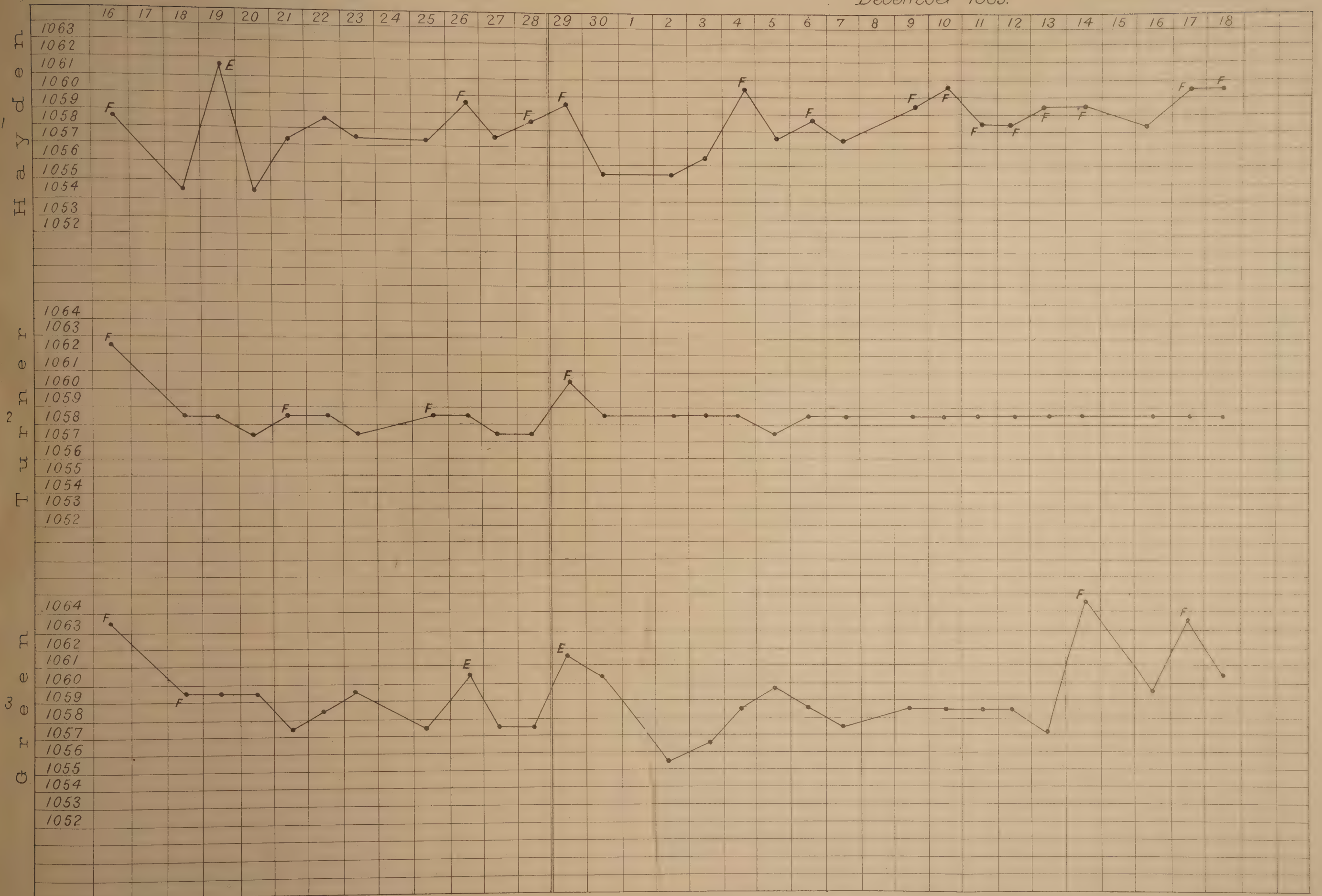
The enumeration of red corpuscles and estimation of hæmoglobin were also carried out and no variation was observed. These observations seem to me to supply the “*experimentum crucis*” of this phase of the inquiry, and I hope that others will take the matter up, feeling sure that their results will prove equally satisfactory.

I shall now give a table (III) setting forth the *results* of observations in general paralysis of the insane. I was very fortunate in beginning this part of the inquiry at an early date, and thus having for my observations a large number

Chart illustrating the observations in Epileptic test cases.

November 1889.

December 1889.



F indicates that patient had an epileptic seizure on day of observation.
 E indicates that patient was excited on day of observation.
 The double line divides the whole period into two periods, the patients living on a mixed diet during the first period, but on a fixed diet during the second.



TABLE III.—Giving results of observations in 40 cases of General Paralysis of the Insane.

No.	Age.	Weight.	Approximate duration of disease.		Percentage of Hæmo-globin.	Number of Red Corpuscles.	Specific Gravity.
	Yrs.	st. lb.	Years.	Months.			
1	40	10 9	2		70	4,600,000	1060
2	37	9 7	1		80	5,010,000	1060
3	48	8 6	1	3	60	4,520,000	1059
4	43	13 4	2		70	4,250,000	1062
5	48	11 9		9	65	4,680,000	1059
6	45	10 1	1	3	65	4,440,000	1062
7	39	7 8	2		55	4,620,000	1058
8	30	10 2	1	6	58	4,280,000	1061
9	39	12 2		6	64	4,850,000	1061
10	47	10 5	1		68	5,200,000	1061
11	50	11 8	1	6	70	4,890,000	1059
12	34	9 6	1	6	75	4,450,000	1059
13	41	11 12	1		70	4,620,000	1061
14	43	13 7	1		65	4,920,000	1059
15	51	13 8	1	6	70	4,870,000	1059
16	50	11 8	1	6	72	4,680,000	1061
17	39	13 1	1	3	74	4,820,000	1061
18	40	13 2	2		70	3,960,000	1061
19	37	9 10	2	3	74	4,980,000	1061
20	37	10 7	1	3	70	4,680,000	1058
21	35	10 2	2	9	60	4,460,000	1060
22	39	10 6	1	6	58	4,560,000	1059
23	43	12 12		8	58	4,280,000	1057
24	44	11 3	1	6	72	4,560,000	1062
25	44	10 12	1		68	4,820,000	1067
26	50	11 0		10	63	4,920,000	1057
27	39	12 2		5	70	5,100,000	1056
28	51	11 0	1	10	70	4,340,000	1060
29	47	10 7	1	6	72	4,860,000	1058
30	35	8 5	2	6	71	4,910,000	1058
31	43	10 1	1		72	4,980,000	1060
32	40	9 5	2		74	4,700,000	1062
33	55	10 1	1		70	4,620,000	1060
34	50	12 3	1	6	70	5,190,000	1059
35	40	10 8	1		74	4,500,000	1062
36	46	11 3	1		70	4,630,000	1060
37	40	10 8	1	2	74	4,500,000	1062
38	46	11 1	1		70	5,160,000	1059
39	41	10 6	2		73	4,690,000	1059
40	32	12 1	1	9	76	4,910,000	1063
AVERAGES		...	...	...	68 $\frac{3}{4}$	4,700,250	1060 $\frac{1}{20}$

of patients suffering from that disease. The shades of differences occurring in the various stages of the disease are so slight that I do not feel justified in making separate tables; I have stated the ages and weights of the patients, the percentage of hæmoglobin, the number of red corpuscles per c.m., and the sp. gravity. It is evident that in this disease the blood-plasma is denser than in melancholia or epilepsy.

I made some observations in general paralysis during convulsive seizures. The observations were so few, the patients so exhausted, that I consider the results of but little value, and shall not in this paper draw attention to them.

I shall now give a table (IV) setting forth the results in secondary dementia, six of the cases being secondary to mania and six secondary to melancholia. The ages, weights of patients, percentage of hæmoglobin, and number of red corpuscles per c.m. are given.

TABLE IV.—Showing results of observations in 12 cases of Secondary Dementia.

No.	Age.	Weight.	Percentage of Hæmo- globin.	Number of Red Corpuscles.	Specific Gravity.
1	42	st. lb. 8 0	61	4,320,000	1060
2	30	10 3	60	4,100,000	1061
3	46	11 1	58	3,940,000	1062
4	44	11 0	54	3,860,000	1060
5	73	9 4	50	3,490,000	1058
6	28	10 0	51	3,670,000	1064
7	55	9 7	52	4,660,000	1061
8	45	9 0	54	4,160,000	1062
9	61	8 4	49	4,310,000	1063
10	30	10 5	48	3,990,000	1062
11	39	9 0	56	4,210,000	1060
12	60	9 1	49	4,130,000	1062
AVERAGES		... ..	53 $\frac{3}{4}$	4,070,000	1061 $\frac{1}{4}$

Surveying the work done, we are justified in drawing the following conclusions:—

(1.) That in insane patients there is a very marked deficiency in hæmoglobin.

(2.) That the deficiency is greatest in secondary dementia.

(3.) That there is no very marked difference in its amount in melancholia, epilepsy, and general paralysis of the insane, though in the last disease I found very high percentages during the stages of marked exaltation.

(4.) That the number of red corpuscles in these insane conditions is below the normal standard.

(5.) That the number of red corpuscles is least in secondary dementia. That it is greatest in general paralysis of the insane; that the variations in the other diseases are too trivial to attach importance to them.

(6.) Remembering that in health the specific gravity of the blood is usually about 1055; that this healthy blood contains on an average 5,000,000 red blood corpuscles per c.m., with its large proportion of hæmoglobin—the great weight-giving element to the corpuscles—we can clearly see that in insane conditions, where I have shown that the specific gravity is higher than in health, and where the red corpuscles and hæmoglobin are deficient, the blood-plasma is unusually dense.

(7.) That it is densest in secondary dementia, reminding one of the excessive density of the blood met with in senility, where, too, mentality totters as a general rule.

(8.) That in epilepsy the density of the blood-plasma varies, becoming denser as the convulsive seizures occur.

I made careful observations as to the relative proportions of white blood-corpuscles to the red. Also as to the blood granules, etc. I must say that I found absolutely no constant variation from the normal. In many instances there was an excess of white corpuscles over the normal number in health. But the irregularity of this occurrence was so great that I am inclined to attach very little importance to this phase of the study. So also as regards the granules of the blood.

III. Indirect Evidence of Morbid Blood conditions in the Insane.—The quantity and quality of the blood depended to a large extent on renal action. And while I have reasons for believing that the study of the action of the other organs of elimination would bear fruitful results, I must state that the

burden of the remainder of this paper is only a mirror, so to speak, of the results of my inquiries into renal secretions, and a short account of the methods adopted for their elaboration.

The patients were males, of various ages and weights. In no instance was there either Bright's disease or alkalinity of the urine. They were under day and night supervision. No effort was spared to insure complete collection of the urine passed. Before the analyses were made the urine of each 24 hours was thoroughly mixed—a very essential point to remember in estimating the total solids. The patients were all fed on a precisely similar diet, every scrap of which was carefully weighed, and all fluids carefully measured. In melancholia and epilepsy the total solids were estimated by Christison's method, the urea by Russell and West's method, while the uric acid was estimated by Prof. Haycraft's, the P_2O_5 was estimated in the ordinary way, as described in McMunn's work on urine analysis.

Just as I had completed my observations on the urine of patients suffering from these two diseases, a new method of urea, uric acid and creatinine estimation was brought before "The Société de Médecine Pratique," of Paris, by M. E. Gautrelet, the able Secretary of that Society. After pointing out very many serious fallacies associated with the older methods of estimating quantitatively the azotised products found in the urine, he introduces his new instrument called the uro-azotimetre. His account of the instrument and the methods to be adopted in its use cover several pages of closely printed paper. To go into its details would be beyond the limits of my object, so I shall confine myself to the briefest account of the principles underlying an instrument which seems destined to play a very important part in future scientific research.

The uro-azotimetre is made by Alvergnyat et Frères, 10, Rue de la Sorbonne, Paris. It is an expensive instrument, but beautifully fitted up. Gautrelet has advanced methods for (1) getting the total nitrogen of the urea, uric acid and creatinine off by one process. This volume is carefully measured by the uro-azotimetre. (2). He shows that the urea and creatinine can be precipitated, and the uric acid nitrogen got off separately. (3). He gives yet another method of precipitation whereby the uric acid and creatinine are thrown down and the nitrogen of the urea got off. With

these results in hand it is easy to find the volumes of nitrogen corresponding to the urea, uric acid and creatinine.

Further, Gautrelet has taken great pains in finding the weights of urea, uric acid and creatinine, which correspond to various volumes of gas. He therefore has three tables prepared giving the weights of these bodies corresponding to an ascending series of volumes of gas. It then becomes a simple matter to estimate the weight of any one of the ozotised bodies named, for having the volume of gas ascertained, we have only to look at the table and find the value of the volume with which we are dealing.

Such, then, is a short sketch of the principles involved in M. Gautrelet's methods. I may add that M. Gautrelet kindly gave me special instructions in the methods of using the instrument, and here I acknowledge very heartily his great courtesy to me.

Many observers in this field run into error in their conclusions I fear, owing to overlooking the conditions under which the observations are made.

To make analyses of the urine of ordinary pauper patients, and forthwith hold up the hands with wonder because the results seem low when compared with what one sees stated as the normal quantities in health is—to use a kindly word—amusing.

Not very long ago a writer on the urea excretion in general paralysis was innocent enough to assume that because urea seemed below the “normal amount” secreted in health, that, therefore, the inflammatory theory—which I do not for a moment try to uphold—had lost one of its best arguments.

I have endeavoured to place this part of the inquiry beyond the range of doubt: Firstly, I fed general paralytics on a highly nitrogenous diet. I found the urea secretion quite as high as that of healthy men on a similar diet. Secondly, I made a series of analyses on general paralytics' urine on ordinary pauper diet, and find that the secretion was not lower than that of healthy men on the same diet. Thirdly, to add to the value of the work I made on several consecutive days a series of analyses of the urine of patients suffering from this disease, because I found that on a mixed and varying diet the variations in the amount of urea excretion are often very great. But by extending the observations

over a protracted period and taking the average, a fairly true result is obtained. With all this trouble, I am now justified in agreeing with the older observers, that the urea of general paralytics is not diminished in the amount excreted. And further, that in other nervous diseases there is evidence of a smaller excretion of urea than in general paralysis.

As I said before, it is useless to make comparisons between the excretions of people fed on pauper diet, and those tables of excretions which we find in text books of physiology.

I therefore got two men in good health to live on pauper diet for a considerable period—one aged 35 years, and the other about 25 years. They collected their urine carefully, and I analyzed it daily.

To make quite sure of the exactitude of this part of the work, I was fortunate enough to insure the co-operation of my friend and former teacher, Dr. Sims Woodhead, now Director of the Royal Colleges of Surgeons and Physicians' Laboratory. We made our analyses quite independently. The differences in our results are too trivial to mention. Our examinations were conducted after the methods I have already named which were adopted in the analyses of the urine of melancholiacs and epileptics. Our observations are only adapted for comparison with the results obtained in the observations in these two diseases.

With the advent of Gauntlet's apparatus, necessity arose for a fresh series of observations on the urine of healthy men on pauper diet. I got the men to resume the pauper fare, and I made analyses with the new azotimetre.

I am in a position to guarantee the absolute integrity of the manner in which the dietetic conditions were enforced. Because (1) I was one of the men. (2) My excretion of urea was somewhat higher than that of the other man (our head attendant).

The whole adventure was carried out with an iron will, as my good superintendent of those days knows.

As far as possible the patient's urine was examined at the same period, during which the blood was examined.

The results which I give on the table of averages came from analyses of consecutive days' urine, by which I have eliminated the fallacies which, as I have already mentioned, arise from observations taken on one day when a varying diet is adopted.

TABLE V.—Showing the averages of results of observations on the urine of healthy men and insane patients, both living on precisely similar diet.

	Number of men on whom the observations were made.	Number of days during which the observations were made on each individual.	Total amount of urine in c.c. passed per day.	Total solids, in grammes, passed per day.	Urea, in grammes, passed per day.	Uric acid, in grammes, passed per day.	Creatinine, in grammes, passed per day.	Chloride of Sodium, in grammes, passed per day.	Phosphoric acid, in grammes, passed per day.
Healthy Men. First Series	2	10	1356·1	37·8	23·2	·9	—	9·0	1·2
Cases of Melancholia	10	7	1295·1	38·87	25·94	1·8	—	—	1·65
Cases of Epilepsy ...	3	13	1526·8	36·8	25·17	2·1	—	—	2·19
Healthy Men. Second Series	2	7	1515·8	39·	18·	1·8	1·3	—	—
Cases of Secondary Dementia	10	7	408·	34·8	20·	2·0	2·9	—	·69
Cases of General Paralysis of the Insane	10	7	1578·	47·0	26·0	3·1	3·3	—	1·6

In the second series of “Healthy Men,” Dementia, and “General Paralysis of the Insane,” the “total solids” were estimated by weighing on a chemical balance after the method described by McMunn.

Table V. gives the results of a vast amount of work reduced to small dimensions. It shows that:—(1) The amount of urine passed is greatest in general paralysis of the insane, that it is least in secondary dementia, that in the former disease it is considerably above the healthy standard.

In melancholia it seems diminished; (2) That the total solids are greatest in general paralysis, least in secondary dementia, with but small variation in the other diseases; (3) That healthy men do not excrete more urea than insane patients; (4) That in general paralysis, epilepsy, and melancholia the urea seems almost equal in the amount excreted, though demented excrete less; (5) That uric acid is increased in the excretions of the insane, being greatest in general paralysis, epilepsy and dementia; (6) That creatinine is higher in general paralysis and in demented than in health; (7) That there seems to be a slight excess of phosphoric

acid in epilepsy, that there is but trivial variation from the normal in the other diseases.

It will be remembered that the cases of epilepsy which I called my test cases were fed on a constant diet for a long period. I examined their urine daily too. I found that in two cases there seemed a slight excess of uric acid excreted just after the fits, that in many instances the total solids seemed to increase after an outburst of excitement or a severe convulsive seizure.

As I bring this paper to a close, I cannot but regret that time and space bar the way and prevent my entering upon a speculative study as to what may probably be the primary cause or causes of insane conditions.

That the blood is in a pathological condition, I hope I have adduced presumptive, direct and indirect, evidence calculated to show. But was the blood diseased *ab initio*? or was the blood deterioration secondary to disease of those organs which are so intimately associated with its formation, the regulation of its quantity and composition?

I submit that the truth, for which we earnestly seek, will be found midway between these two hypotheses—that in some forms of mental diseases the blood is imperfect *ab initio*, that it fails to supply materials for the growth and development of the brain; whilst that in other forms of mental disease the blood change is secondary to organic disease, and morbid mentality results owing to the inability of the brain of the unstable to resist the influence of its diseased blood supply.

CLINICAL NOTES AND CASES.

Notes of a Case of Epilepsy in which the Vertebral Artery was tied. (Communicated by TELFORD SMITH, B.A., M.D., B.Ch., Assistant Medical Officer, Royal Albert Asylum, Lancaster).

The following notes of the after-history, up to the present date, of a case in which the operation of ligature of the vertebral artery was performed for the arrest of epilepsy, may be of interest.*

* The case has been for nearly eight years under the observation of Dr. Shuttleworth, to whom I am indebted for some of the following particulars, and whose kind permission I have to make use of the particulars recorded in the Case Books.

The patient was admitted to the Royal Albert Asylum on December 7th, 1882, from the Liverpool Workhouse, where, towards the end of 1881, his left vertebral artery was tied by Dr. William Alexander.

(The case is referred to in Dr. Alexander's book, "The Treatment of Epilepsy," p. 3, and is one of the 36 cases in which he performed the operation. In most of the cases he tied both vertebral arteries simultaneously.)

History on Admission.—C. M., male, age 11. A congenital imbecile. Mother living (in Liverpool Workhouse). Father died from an accident. Mental deficiency first observed in childhood. Attributed to fright of mother during pregnancy.

Has had scarlet fever, measles, and whooping cough. Nothing particular in his general aspect. No deformity. No sign of bone disease. No sign of paralysis or chorea. Complexion fair. Touch, smell, hearing, taste, hand, all normal.

Speech fairly good. Sight, right pupil larger than left. Slight drooping of left eyelid.

Teeth fairly regular and good.

Palate normal. Heart sounds normal. Respiration normal. Large triangular scar at lower end of left sterno-mastoid.

Dimensions of Head.—1. Circumference, $19\frac{7}{8}$ inches; 2. Transverse (from ear to ear over vertex), 11 inches—transverse (from ear to ear, calliper measure), 5 inches; 3. Longitudinal (from nasal notch to occipital tuberosity), 12 inches—longitudinal (from nasal notch, calliper measure), $6\frac{7}{8}$ inches; 4. Width of forehead (between external angular processes of frontal), 4 inches.

Last epileptic fit 30th August, 1881; used to have 20 to 30 per month, each lasting from two to five minutes. None since ligation of left vertebral artery. Bodily health and condition fairly good. Placed among infant boys on girls' side.

The Notes following are taken from the entries in the Case Book.

1883, January 31st.—A fairly intelligent lad, talks well and knows a few coins; is fond of buttons, and keeps two or three in his pockets. Is quite happy, and has good health. He has not had any epileptic attack since admission. Clean in his habits.

July 17th.—In good health and quite happy; he has not had any fits since admission. Considerable mental improvement.

1884, January 29th.—He was in the infirmary for 12 days in October suffering from stomatitis. He is now quite well and is going on satisfactorily. He has not had any fits.

1885, February 21st.—He has had very good health during the year and has had no fits. He has improved at school.

June 9th.—He seems to have had a slight epileptic attack to-day for the first time. During dinner his right arm suddenly became stiff, and his face pale for a few seconds.

October 12th.—He has had about eight slight epileptic attacks since the last note, most of them consisting of momentary loss of consciousness, with or without falling. This morning, however, at about 9.15, he had a severe attack, with well-marked convulsive movements, lasting for more than an hour, followed by vomiting. After the convulsions ceased he seemed dazed for some time, and kept turning round whilst standing in an upright position.

Is being treated with bromides and belladonna.

1886, March 6th.—Since the above note he has been having fits much more frequently. He had 49 altogether last year, since they recommenced in June; most of them are slight, but some of them are well-marked convulsive attacks. Intelligence much the same; no further improvement at school.

1887, June 1st.—Has had 106 fits since January, 1886. He is now transferred to senior boys. No improvement mentally.

1888, July.—Still continues to have a large number of epileptic fits. No improvement mentally or physically.

December.—Total number of fits during the year:—1st half, 74; 2nd half, 157; total, 231.

1889, December.—Total number of fits during the last year:—1st half, 116; 2nd half, 129; total, 245.

Is being treated chiefly with belladonna, but without marked effect on the fits.

1890, July 1st.—In good health. Eats and sleeps well. Does not talk much, but, when spoken to, he laughs and says he “wants marbles.” He knows a penny, and when given one says he will “buy lots of marbles.”

He walks well, and has full power in his limbs. There is a slight ptosis of left eyelid, and left pupil is markedly smaller than right. When his tongue is protruded there is a deflection of about $\frac{1}{8}$ – $\frac{1}{4}$ inch to right side.

There is marked anæsthesia of surface of body—does not seem to feel the prick of a pin.

The fits now usually last about ten minutes, and the convulsions are general, but somewhat more severe on right side.

After the convulsions have ceased, that is, during the post-epileptic state, he often attempts to get up, and would wander about the room in an unconscious state, if not prevented. During the fits he does not bite his tongue, nor does he wet or dirty himself, but there is generally a seminal emission. More than half the fits occur in the day time. For nearly 12 hours after a fit he seems in an extremely stupid and dazed condition. His mental state is slowly but steadily deteriorating. His diet consists of milk and eggs and farinaceous food, with a very small quantity of mince meat.

Remarks.—Dr. Alexander, writing in 1889, says of the

operation of ligature of the vertebrals:—"It was performed in the hope that a lessened supply of blood to the hinder brain and spinal cord would result in a diminution or cessation of the epileptic convulsions. On most theories of epilepsy the expectation was a very reasonable one, because it was hoped that the diminution would be more permanent to the parts supplied, after ligature of the vertebrals, than after ligature of other vessels, on account of the absence of anastomosing branches, and the restraints to dilatation of the unligatured vessels by the bony canals through which the cerebral vessels pass, as the experiments of Sir Astley Cooper on dogs tended to prove.

"For a time these expectations were realized, but soon relapses occurred; and in May, 1884, an analysis of 36 cases of operation for epilepsy showed only eight cases which have had so few fits since operation that they may practically be considered cures. Eleven were for several months so much improved that they seemed to be cured; and although the fits have recurred in all these, yet the improvement is still distinctly manifest in many.

"In sixteen cases there did not seem to be any decided improvement, either of a temporary or permanent kind. Three died out of the thirty-six, one from hæmorrhage, one from embolism, and one from pleurisy. All the cases operated on were chronic, hopeless epileptics, many of whom had gradually become mentally affected. None of the latter were permanently benefited to any practical extent. Of the others, the best case was an idiot boy, now in the Royal Albert Asylum, Lancaster; and the next best a perfectly sensible, healthy lad. In two cases of traumatic epilepsy, one was cured and the other much benefited. It is impossible, therefore, to say, before operating, what cases would probably derive benefit from the operation, and what would not. On account of this uncertainty the writer (Dr. Alexander) has ceased to recommend or perform the operation for the last two years," preferring now the operation of removal of the superior cervical ganglia of the sympathetic.

The case of this boy seems to be one in which the imbecility and epilepsy were both congenital, and in which the latter can only be considered a complication, and not the cause, of the mental state; but in which, nevertheless, the action of the epilepsy on the intellectual deterioration

is seen to be slow and gradual, but none the less certain.

We see the arrest of the epilepsy for nearly four years after the ligature of the artery, during which time there was marked mental improvement under training, but followed by loss of this improvement on the return of the fits, showing, as Dr. Shuttleworth remarks in his paper on "The Physical Features of Idiocy in Relation to Classification and Prognosis," that, "speaking generally, epileptic idiots are disappointing subjects for tuition. They make a fair amount of progress for a time, but if they have a severe recurrence of epilepsy lose what knowledge they have acquired."

Parotitis in the Insane. By THEO. B. HYSLOP, M.D., Assistant Medical Officer, Bethlem Royal Hospital.

The following three cases of parotitis occurring in insane patients are interesting, inasmuch as there was a remission of the mental symptoms during the recurrence of the inflammatory condition of the parotid.

J. W., æt. 49; admitted to Bethlem August 2nd, suffering from acute delirious mania. Two weeks before admission she was sleepless and excitable, rambled in speech, noisy, loquacious, and violent. At first she was treated with morphia, which caused more excitement, so hyoscine was given with little better results. On admission she was very violent, tongue dry and cracked, epithelium coming off in flakes, sordes on gums and teeth, refused food, bowels constipated, urine retained (sp. gr. 1024, acid, no albumen or sugar), and had to be drawn off with catheter. Pupils dilated, but reacted fairly well to light and accommodation. She lay in her room in a prostrate condition, but occasionally throwing her arms and legs about in a purposeless manner. Voice weak and husky; incoherent, muttering delirium. She resisted everything that was done for her, and absolutely refused food. Pulse rapid. Temperature 101° in evening.

August 7th.—Hard and brawny swelling noticed in region of right submaxillary gland, rapidly increasing in size, and spreading down the neck. No fluctuation. Temperature 102·2°. Dysphagia and some dyspnoea caused by the swelling.

August 9th.—Swelling extended to right parotid region; less in submaxillary. Temperature 99·6° morning, 103° evening. Is conscious of her surroundings. Hot fomentations applied.

August 12th.—Swelling in right parotid region decreased, but marked swelling now in the left, with considerable tenderness on pressure. Hot fomentations applied constantly. Mentally much improved; has made several attempts to speak. Appears to notice her surroundings, and recognizes her friends. Temperature 101° in the evening.

August 16th.—Swelling of parotid still present; rapid respirations; dysphagia marked. A few moist râles heard at base of right lung.

August 19th.—To-day spoke a few words quite intelligibly; quite conscious, and apparently rational. Large area of dulness over right base posteriorly, and some crepitations and dulness of left base. Pulse weak; respiration difficult; died in the evening.

Post-mortem there was found congestion of the inner membranes of the brain, and excess of subarachnoid fluid. On stripping the pia mater there was noticed a finely-granular and mottled appearance on the surfaces of the convolutions, and on microscopic examination the blood-vessels of the cortex were enlarged, and much more prominent. There was a want of uniformity in the staining, and the cells were somewhat indistinct, and surrounded by nuclei. The vessels at the base were healthy, and there was no evidence of disease in the venous sinuses. Heart valves healthy; some fatty degeneration of muscular substance. Slight pneumonia of left base, and some grey hepatization of right lung, with trace of old-standing inflammation at the apex. Trachea and larynx normal; liver fatty; left kidney normal, right kidney firm and congested; capsule slightly adherent, cortex firm and dark in colour; boundary zones firm and well-defined. In the pelvis of kidney there was some greenish pus, and traces of effused lymph on the surfaces of the cones and the lining membrane of the pelvis. Bladder normal.

CASE II.—C. M. S., female, æt. 31; admitted January 2nd, suffering from an attack of acute melancholia. She had four previous attacks of depression. Always at her catamenial periods she was somewhat depressed, had hallucinations of sight and sound, and suicidal tendencies. On admission she was much depressed, with dark rings round her eyes. Some proptosis and general aspects of melancholia.

January 23rd.—Very violent; tried to pull her hair out, and attempted to injure herself in other ways. Sleepless; refused food; fed artificially; refused to speak.

March 13th.—Confined to bed on account of sickness and pain in epigastrium. To-day some swelling noticed in left parotid region, causing great pain on opening the mouth, or on pressure. Hot fomentations applied.

March 15th.—Swelling increased; very tense and tender. Mentally somewhat more rational.

March 18th.—Swelling on left side much decreased. In right

parotid, however, there is considerable swelling and pain. Mentally quite cheerful and sane.

April 5th.—Parotid swelling entirely gone. Has remained quite well mentally. Discharged well subsequently.

CASE III.—S. P., male, æt. 74; admitted January 29th, suffering from acute mania. Six months previously he had a partial paralytic seizure affecting left side, followed by sleeplessness, emotional instability, and latterly excitement, with incoherence and refusal of food. On admission he was much exhausted, with a red, dry tongue, constipated bowels, enlarged prostate, and some cystitis. Urine sp. gr. 1030. Alkaline containing pus, blood, and albumen. Refused his food. Incoherent rambling, and confused, with delusions as to persecution, etc.

January 31st.—Very restless during the night; noisy and violent; had to be put in padded room; given 30 grs. of sulfonal.

February 2nd.—Has to-day some pain in the left parotid region on opening his mouth.

February 3rd.—This morning there is a large swelling in the left parotid region, evidently involving the whole parotid gland. The surface is red, but there is no evidence of fluctuation. Quieter, and taking food better.

February 5th.—An incision $1\frac{1}{2}$ inches long was made into the swelling, with relief of the tension. Mentally much more composed and rational. Seemed to recognize people around him. Took food better, and seemed to be nearly well.

February 11th.—Much improved; quiet, and quite rational.

February 29th.—Since last note patient has remained well, but now has relapsed into a condition of weakmindedness, with occasional excitement.

OCCASIONAL NOTES OF THE QUARTER.

The Annual Meeting.

The Glasgow meeting undoubtedly proved a success, as it was sure to be, under the able presidency of Dr. Yellowlees. His address, thoughtful, practical, and eloquent, met with a warm response from the members of the Association present. If it was forcible in language, it was also fair. If it was an indignant protest against a recent movement, it was free from dogmatism. If it dealt in destructive criticism, it was also constructive. It was composed before the final collapse

of the crudities of the London County Council's Asylum Committee's report. The address will no doubt be widely read, as it so well deserves to be, and will enlighten many well-intentioned but uninstructed people who have been indulging in unfounded expectations in regard to the recovery, or, as such would prefer to call it, the curability of the insane.

One result of the spirited and common-sense discourse of the President was the resolution to appoint a committee, the object of which is to extend the means of individual treatment of acute and presumably curable cases in existing asylums for the insane. The committee appointed consisted of the following members:—Drs. Clouston, Rooke Ley, MacDowall, Hayes Newington, Rogers, Savage, Hack Tuke, Urquhart, White, Whitcombe, Yellowlees.

The exact terms of the reference from the annual meeting to its committee was decided upon as follows: "To prepare resolutions to be submitted to the next annual meeting in order that the opinion of the Association as to the best arrangements for the medical care and treatment of the insane should be clearly expressed." This committee it will be seen must report to the next annual meeting.

Another important outcome of the deliberations of the Glasgow meeting was the adoption of the Nursing Committee's Report, appointed at the annual meeting last year to inquire into the question of the systematic training of attendants in asylums. The report, which succeeds this "Occasional," will be, no doubt, read with great interest by our readers. That it will bear fruit in the future we have every reason to expect. This expectation is strengthened by the success of a similar movement in the McLean Asylum, Boston, U.S., due to the extraordinary energy and zeal of Dr. Cowles, the medical superintendent of that institution.

New Hospital for the Insane at Montreal.

It is a great satisfaction to know that whatever may be done in regard to the future of the Longue Pointe Asylum, the destruction of which by fire was recorded in the last number of this Journal, there is now in operation in the vicinity of the same city an excellent institution, which there is every reason to believe will confer an enormous

benefit upon the insane population for which it is designed. It may be stated that Mr. Alfred Parry and other gentlemen, dissatisfied with the condition of the former asylum, agitated a few years ago for the erection of an asylum more on the lines now usually adopted in civilized communities. Actuated by these humane sentiments, the promoters of the enterprise appealed to the charitably disposed for funds to enable them to undertake it, the result being the erection by private subscription, aided by a small legislative grant, of the present building. It is styled the Protestant Hospital for the Insane, and is under the able charge of Dr. Burgess,* whose previous experience has been gained at the asylums of Toronto, London (Ontario), and Hamilton.

It is incorporated by a special Act, a permanent provision of which is that all revenues, derived from endowment, paying patients, and other sources, must be expended in the maintenance of the building and the patients. A subscription of 200 dollars constitutes a governorship, and the immediate management of the corporation is invested in a Board of Management, composed of twelve members, whose term of office is three years, four retiring annually by rotation, but eligible for re-election.

The estate, which embraces 118 acres of good, easily tilled land, in a pleasant, healthy locality, is situated at Verdun, about four miles above the city of Montreal. In praise of the site too much cannot be said, its one defect being its distance from the railway, which materially increases the cost of supplies, and is a hindrance to the visiting of the inmates by their relatives. To fully appreciate its beauty one must see it. The mountain shrouded in green woods, its lower slopes dotted with villas, surrounded by gardens, rises behind, and in front stretches the mighty St. Lawrence with its timbered islands, while almost at the doorway are the flashing and dancing Lachine Rapids, with their own musical roar, affording a never-failing water supply of purest quality.

The hospital, while possessing defects, as might be expected when not erected under the supervision of one versed in the specialty, is on the whole an extremely creditable building, and most of the defects can be remedied in time. It, with the land, has entailed a cost of about 175,000 dollars. The buildings, three storeys in height, as they at present

* We desire to express to Dr. Burgess our obligation for the information which he has kindly placed at our disposal.

stand, consist of a central executive department and west wing, providing accommodation for 200 patients. When the east wing is erected, the entire structure will present a frontage of 290 feet. The administrative building contains on the ground floor the various offices, above which are the medical superintendent's apartments. The rear of the central building is composed of the kitchen, bakery, store-rooms, &c., and in the upper storey is situated a fine chapel and amusement hall. Communication with the several parts of the building is obtained by means of corridors radiating from a central octagonal hall, which extends unbroken to the roof and is lighted by a sky-light the full size of the same. A dry, concrete-floored, well lighted basement extends under the whole edifice, and contains the furnaces for heating, crematories for the destruction of refuse, and various storage rooms. Externally the buildings are plain, but not unpleasing, constructed of coursed limestone relieved by cut stone cornices, sills, &c., contrast being obtained by the introduction of pressed red brick for the jambs and arches over the lintels of the doors and windows. The outer stone walls are lined with brick, while all internal partitions being also brick, make the structure as nearly as possible fire-proof. The roofs are a combination of slate and galvanized iron, and the floors throughout of the best seasoned birch.

The laundry, which is a substantial brick building fitted with the most modern appliances for washing, drying, ironing, &c., is detached and some distance in rear of the hospital proper. At one end of it is the engine and pump room, also the apparatus necessary for lighting the asylum by electricity, above which rises the water tower, affording the requisite pressure for the distribution of water over the building. The steam pump will furnish a water supply of 500 gallons per minute, and the arrangements are such that in event of fire any part of the hospital can be flooded in a few moments.

The heating, ventilating, and water-closet system is that known as the Smead-Dowd. Nine hundred cubic feet of space are allowed to each bed, and provision is made for changing the air throughout the building five times in an hour. All closet refuse is desiccated by a constant current of hot air passed over it, and then burned at intervals, by which means all objection regarding sewage contamination is avoided.

Hypnotism and the British Medical Association.

An important outcome of the discussion on hypnotism at the Psychology Section of the recent annual meeting of the British Medical Association is the appointment of a Committee to investigate its phenomena, more especially in relation to its therapeutic value. Professor Gairdner has done signal service to the fair and scientific study of phenomena, too long neglected, by moving the following resolutions:—

“That the subject of hypnotism should be considered by a committee of medical men, with the object of endeavouring to ascertain the true nature of its phenomena, its value, and the propriety or otherwise of its use in the treatment of disease, and that the Council of the British Medical Association be requested to sanction the appointment of a committee for this purpose;” he also moved “That this Section protests in the strongest manner against public exhibitions, for unscientific and miscellaneous objects, and for the purposes of gain or amusement, of the phenomena of sleep, a practice which is antagonistic to public morality.”

Those who are familiar with the history of hypnotism in this country cannot fail to recall the circumstance that more than forty years ago Mr. Braid, of Manchester, offered to demonstrate to the British Medical Association, when it met in that city, the true nature of hypnotism, and that his demonstration was contemptuously declined. He showed a number of striking experiments, however, to those medical men who were willing to witness them privately, and his success was complete. In 1889, hypnotism was first discussed, and now, in 1890, there has been the first demonstration before a section of the Association, and although only elementary phenomena were exhibited, they excited surprise and interest among those who witnessed them.

That the medical profession should have left to the charlatan and professor of legerdemain the study and practice of the art of hypnotism is nothing less than a scandal. Nothing can illustrate the absurdity of this course better than the fact that a few years ago so distinguished a physiologist as Heidenhain was ignorant of the phenomena of artificial sleep and learned his lesson from an itinerant lecturer, the result being his personal study of hypnotism and the production of an admirable little book on the subject. Had the knowledge of hypnotism been communicated at the medical schools among other physiological facts, as it should have

been, such an undignified reverse of the proper order of things could not have occurred. The action now taken by the British Medical Association, for it will doubtless endorse that of the Psychology Section, may do much to remove the ignorance of hypnotic phenomena in the future among those to whom laymen have a right to look for instruction.

An Out-patient Department at the Wakefield Asylum.

An important movement has been made by the West Riding Council in the initiation of a scheme for the treatment of out-patients, warmly advocated by Colonel Spencer Stanhope, and now fairly established at Wakefield Asylum. The Committee, with the sanction of the General Asylums Committee, have formulated a scheme for the treatment of out-door patients in connection with the asylum, and have passed the following resolutions with respect thereto:—

1. That with a view to meeting the difficulty at present existing, and widely recognized in the early detection and treatment of mental disease and kindred nervous affections, and in consideration of the fact that the special knowledge requisite and the appliances necessary for treatment in this branch of medicine can only be obtained, in a large proportion of cases, in asylums for the insane, the committee approve of arrangements being made at the West Riding Asylum, Wakefield, to afford an opportunity of consultation, free of charge, to those suffering from such ailments, especially in their incipient stage.

2. That the arrangements to be made be such as not to interfere with the ordinary duties of the staff, nor to cause any expense to the institution.

3. That in cases, where the Medical Superintendent thinks it desirable, the necessary medicines be supplied from the asylum dispensary at cost price, to be paid for on their delivery.

4. That no one shall be deemed to be eligible for such consultation or treatment except persons whose symptoms are, in the opinion of the Medical Superintendent, of such a nature as to require advice and treatment of the special character available at the asylum.

5. That persons desirous of availing themselves of such consultations must procure a recommendation in the prescribed form from a registered medical practitioner, or from a Justice of the Peace for the West Riding, or any county borough therein, or from the Chairman of a Board of Guardians, or from a member of the West Riding Asylums Committee, and must attend at the waiting room, at the Wakefield Asylum, at the time fixed by the Medical Superintendent.

6. That it be an instruction to the Medical Superintendent to exercise due discrimination with respect to the cases to be dealt with, so as to prevent the above arrangement from interfering with the practice of the medical men in the West Riding, or in any way bringing the asylum authorities into conflict with them.

7. That steps be taken to inform the medical faculty, Guardians of the Poor of those unions whose patients are sent to the Wakefield Asylum, and the public generally of the nature of the arrangements provided under the foregoing resolutions.

That this experiment will be watched with considerable interest there can be no doubt. If it be found possible thus to encourage the friends of patients to bring the sufferers for skilled advice before the need for asylum treatment is obvious to all, and if confidence, inducing relatives to retain the care of suitable cases, can be thus engendered, something will have been done towards preventing insanity and more towards lessening the overcrowding of asylums.

Report of the Committee appointed at the Annual Meeting of the Association to inquire into the question of the systematic training of attendants.

The Committee reports that after full discussion, both by correspondence and by meeting, the members have arrived at a unanimous opinion on the questions referred to them.

The Committee was directed to consider and report on:—

1. The systematic training of nurses and attendants in asylums for the insane.

2. The keeping an efficient register of such nurses and attendants.

3. The granting of certificates of proficiency.

The wording of question (2) is somewhat ambiguous. It might mean that a register is to be kept of all attendants put into training; or it might mean that the register should only be for those who have been trained, and have obtained certificates. The Committee reads the question in the latter sense. While it will, of course, be essential to know where certificates have been bestowed, the keeping of a register for all attendants put into training would entail enormous and redundant labour on some official of the Association, and, further, such a proceeding is not necessary to the originating idea of ad-

ancing the proficiency of attendants. Question (2) will therefore be considered as a pendant to question (3).

The Committee's first duty was to ascertain whether, in the opinion of its members, it is advisable that the Association should institute a scheme for the training of nurses. There was no hesitation whatever in coming to the conclusion that the Committee should so advise the Association. It was then necessary to settle the scope and details of such a scheme. There is here some room for diversity of opinion. The desire to fix the highest possible standard of efficiency has to be controlled by a due regard to practical considerations, and it has been found to be no easy matter to adjust these two elements, so that the training should, on the one hand, be more than mere routine, and yet, on the other, not be so exacting as to deter attendants from formally entering into it. Individual members of the Committee have, by their own work, acquired some experience of such a system, and this experience entirely favours caution in procedure.

The Committee here wishes to state that in the recommendations made below it has sought to frame a scheme that should be possible to work under existing conditions. It trusts, however, and, indeed, thinks that this scheme, after it has been brought into action, and has been established by careful and patient fostering, may be considerably extended with advantage; and that, as a consequence, the possession of a certificate from the Association may eventually become a *sine qua non* for the holding of more responsible posts which are open to attendants, either in asylum or in domestic nursing of the insane.

The Committee have followed precedent in recommending that a considerable discretion should be left to individual superintendents in the choice of methods to be adopted in the acquirement of knowledge by attendants. But in such matters as the length of training and the attendance on formal lectures it appears to be only right that a definite minimum should be laid down. It also thinks that training should undoubtedly be confined to the requirements of those conditions of disease, both bodily and mental, which are ordinarily met with in asylum life, there being added thereto such instruction as will enable candidates to render "first aid," not only for accidents of ordinary life, but for the special accidents and intentional self-injuries that may arise in an asylum.

It prescribes also a period of probation, in order that a superintendent should have an opportunity of seeing whether an attendant has capacity for undergoing training with advan-

tage. It by no means follows that an attendant, who is not considered to be likely to repay the trouble thus specially expended on him or her, should also be considered as unfit to be an attendant at all. The Committee wishes it to be clearly understood that such is not its view. There is plenty of room for honest officials who will do such duty as is laid on them conscientiously and in strict compliance with orders, although intellectually they may not meet the requirements of a certifying body. The object of such a scheme as this, in the opinion of the Committee, should be to push improvement, where it is capable of being pushed, and thus to produce a higher standard. The common experience of all superintendents is that many of the most faithful and serviceable attendants would fail to adapt themselves to formal training. But, on the other hand, successful training should undoubtedly give an attendant advantage over the untrained in filling up the more responsible positions.

It should be added that in practice training would probably commence in most cases from the day of engagement, though it would not count till the three months had expired. The Committee also think that in the case of those attendants who have been already trained in the spirit, if not exactly in the letter of the regulations, provision should be made for their being allowed to offer themselves for examination *before* two years elapse *from the institution* of this scheme; in each case the consent of the Council should be obtained.

Before considering the next question of reference—the question whether the Association should be recommended to grant certificates or not—it was necessary to consider the matter of examinations. The Committee was readily convinced that these are desirable, not only as a preliminary to the granting of certificates, but also as a test of the success of training, even should the Association not elect to go as far as giving a certificate. It was felt that there should be definite consummation of training.

The times, places, and nature of the examination, as well as the appointment of the proper persons to conduct them, all raised questions, chiefly connected with the convenience of examiners and candidates. Uniformity, by which alone a definite value can be given to examinations, had to be arranged for, and required considerable adjustment of details. In considering these matters, the Committee were brought face to face with an element which pervades and affects this and subsequent parts of the scheme. It will be more conveniently referred to in a later paragraph, but it may here be stated that

it was thought right to associate, for the purpose of conducting the examination, an assessor with the superintendent of the asylum whose candidates had to be examined. The presence of the latter would tend to encourage candidates and to ensure that what knowledge they had was satisfactorily brought out; while the former would carry out the principle of the Association having a control of the examination, if it is to lead to the granting of certificates.

The question of prizes was duly considered, but it was found to be impracticable to centralize examination, and, therefore, impossible to so far collate the results as to justify any award on the part of the Association. The Committee, however, would encourage the granting of prizes by superintendents to the most successful of their own candidates, it being clearly understood that they were merely class honours.

Having thus disposed of the first question referred to it, the Committee turned to the subject of certificates. As stated above, a very serious question arose in the consideration of how far the Association is to commit itself by granting a certificate to an attendant. While it is evident that a certificate given by an individual superintendent without the direct participation of the Association would not rank any higher than an ordinary testimonial now does, it is equally apparent that the Association must not issue any document that can be misinterpreted, nor must it give the weight of its name to any document that can by any possibility be deemed to cover more ground than is intended. The mental attributes of a really good attendant can be divided into three groups:—*Morality*, including steadiness, sobriety, trustworthiness, etc.; *suitability*, including general aptitude, firmness of purpose, control of temper, courage, intelligent and patient application of knowledge to cases, and that indescribable element of compatibility with insane people which is necessary to make control at all acceptable to patients; and, lastly, *proficiency*, arising from experience and careful training. (Physical health, stature, etc., are clearly outside the requirements of this certificate.) The examination and certificate can only carry *future* weight in regard to “proficiency;” for it is a matter of frequent observation that after a time, and especially after prolonged care of trying cases, an attendant may lose his suitability in one way or another, while departure from morality is only too common, and may readily be fatal to any claim to fitness for attendance on the insane. It would be obviously wrong, therefore, to invite the Association to give any certificate that

can be taken to bear testimony, after its issue, to anything beyond the possession of a certain knowledge of the principles of nursing the insane. But, on the other hand, the Committee thinks that the Association is bound to protect itself, by requiring, at the time of examination, formal evidence of morality and suitability and recording this on the face of the certificate. The public should know that the Association has done its best to produce a person who is not only clever in his calling, but qualified, at the time of examination, in the other directions indicated, to execute those duties of trust and responsibility which mark the difference between nursing the sane and attending on the insane. One consideration must not be lost sight of. While an attendant is in asylum service he is under more or less efficient supervision, but when he leaves the asylum for private nursing, instead of being under control, he is too often master of the situation. Being freed from discipline, he is often tempted to take advantage of his position, and he not unfrequently falls to the temptation. In such a case the possession of the certificate by a person who has become unsuitable or morally unfit to hold it could not but be prejudicial both to the public as well as to the Association, and, indeed, fatal to the idea of certification, unless it were clearly set forth that character and suitability are not guaranteed after the date of issue.

A form of certificate has therefore been sketched by the Committee, in the hope that the risk of misuse will be minimized, without a too forcible suggestion of possible misconduct being made—a suggestion which would cause needless offence and seriously militate against its value to its possessor.

As to an efficient register, the Committee can only suggest at present that a mere list of successful candidates should be kept. It feels that until the scheme is thoroughly well established it will be impossible to provide for a register that shall be efficient in the proper sense—the certain expurgation of the names of those who shall forfeit by misconduct their claim to be recognized as worthy attendants. As will be seen by the formal recommendations appended, the Committee are prepared to advise the erasure, by order of the Council, of such names after due inquiry into the circumstances, and they advise that the register shall be published annually in the *Journal*, together with the names erased (if any). In asylum service, misconduct would be almost certainly followed by report and erasure, but in private nursing it would be very different, it is feared. Further, mere erasure of the name would not suffice, unless the certifi-

cate itself could be recovered by the Association. It is believed that if the certificate is unreservedly made over to a successful candidate there is no sort of legal compulsion to make him return it against his will. The Committee has therefore devised a plan by which the Association can possibly, though not certainly, regain and annul the certificate of a holder who misconducts himself. But when the system has grown and can stand the strain of more stringent regulations, no doubt some further plan can be devised by which a certificate would have, in order to continue its value, to be returned at stated times to the officers of the Association to be reattested on satisfactory evidence of continued good conduct, and thus each certificate and its holder could be followed. Such an operation, however, would require the appointment of a Registrar as a separate officer of the Association; and the Committee, in view of the difficulties, would not now go beyond the limits defined above. It is hoped that every member of the Association would endeavour to extend the usefulness of this list by ascertaining if a candidate for employment, whether in asylum or private work, was still kept on the register; and also by at once reporting any misconduct to the Secretary.

The Committee fully discussed the propriety of charging candidates a small fee to cover the expenses of examination and certificate. It decided that it would not be wise to do so now, though perhaps, if a satisfactory plan is worked out for keeping a really efficient register (as defined above), candidates might be expected to contribute to the expenses involved, in return for the obvious benefit they would receive from unworthy attendants being kept off the register.

Recommendations of the Committee :—

TRAINING.

1. That a system of training of attendants in asylums be instituted by the Association on the following lines —
 - a. A period of three months' probation be required before the attendant is considered to have formally entered training.
 - b. A period of two years' training and service in the asylum (including the period of probation) to be required before an attendant is allowed to become a candidate for examination.

c. System of training to be by :—

Study of text-books—the Committee recommending the Handbook for Attendants prepared by a sub-committee of the Association in the year 1885. Other books at the direction of each individual Superintendent.

Exercises, under head and ward attendants, to be arranged at the discretion of the Superintendent.

Clinical instruction in the wards by the medical staff.

Lectures or demonstrations (other than ward instruction) given by the medical staff, at least 12 of which shall be attended by each attendant during his two years of training.

Periodical examination to test progress left to the discretion of the Superintendent.

d. Scope of training should be limited to the ordinary requirements of nursing of, and attendance on, insane patients, combined with instruction in the general features of mental disease, together with general ideas of bodily structure and function, sufficient to enable nurses under training to understand such instruction and to qualify them to render ‘first aid,’ especially in the case of accident or injury that may arise specially in Asylums. Anything beyond this is considered to be outside the scope of the present inquiry.

EXAMINATIONS.

2. That examinations for the purpose of granting certificates of proficiency to successful candidates be instituted by the Association under the following conditions—

a. Examinations to be held twice yearly—on the 1st Monday in May and the 1st Monday in November.

b. Examination to be held at individual asylums, wherever there may be candidates.

c. Examinations to be partly by papers and partly *vivâ voce*.

d. The papers to be set by the Examiners of the Association (appointed from time to time for examining medical candidates for the diploma of the Association). The examiners, when setting the papers, to fix marks to each question, and to fix the minimum total required for a pass. The Council to frame regulations to prevent the contents of the papers being divulged before the proper time.

- e.* The examinations to be conducted as follows :—The papers to be answered on the days fixed, under the supervision of the Superintendent, and to be examined and valued by the Superintendent, and an Assessor. The practical part to be conducted by the Superintendent and the Assessor on as early a day after the fixed day as can be conveniently arranged by the Superintendent and Assessor.
- f.* The Assessor to be the Superintendent of a neighbouring asylum, the consent of the Council of the Association to his acting as such having been obtained.
- g.* The candidate to obtain a certificate of morality and suitability from his or her Superintendent before being admitted to the examination, and this certificate shall be sent by the Superintendent and Assessor to the Secretaries when application is made to them for the form of certificate to be given to the candidate.
- h.* Attendants who at this time, or at any time before two years after the institution of this scheme, shall have, in the opinion of their Superintendents, been afforded and have availed themselves of opportunities of training to an extent contemplated under the first recommendation, even if it be not exactly in conformity with the prescribed regulations, shall be allowed to present themselves for examination if the Council of the Association approves.

CERTIFICATES.

3. That certificates of proficiency be granted under the following conditions —

- a.* The certificate to be in the form appended.
- b.* The certificates to bear consecutive numbers, to bear the seal of the Association, and to be issued and countersigned by the Secretaries of the Association for the division of the kingdom where they are granted.
- c.* The certificates to be granted and signed by the examining Superintendent and his Assessor.
- d.* The Superintendent to send to the General Secretary a list of successful candidates after each examination.

REGISTER.

4. That a Register of Candidates who have passed the examination be kept by the General Secretary of the Association.

5. That in case of misconduct on the part of a holder of a certificate, a Superintendent (or, in private nursing, the medical man in charge or the employer) should be requested, by a note on the back of the certificate, to at once transmit a report of the circumstances to the General Secretary, who will lay the same before the Council for consideration. The Council will, if it thinks fit to do so, direct the Secretary to erase the name of the delinquent from the Register.

6. That each candidate, before receiving the parchment certificate, shall sign the appended agreement.

7. That Superintendents and other members of the Association on engaging attendants who profess to be on the Register should satisfy themselves that such is the case, by inquiring of the Secretary.

8. That the Register be published annually in the Journal, together with the names (if any) that have been erased by direction of the Council.

FORM OF CERTIFICATE.

(ON FACE.)

This is to certify that _____ has, after examination by us, shown to our satisfaction that (he *or* she) has attained proficiency in nursing and attendance on insane persons. Before this certificate is granted, it has been testified to us by _____, under whom (he *or* she) has been trained for two years, that _____'s character, conduct and aptitude have been such as to entitle (him *or* her) to be admitted to examination for this certificate.

Signed, _____

Countersigned, _____

Examiners.

Hon. Sec. for

No.

Seal of the Association.

[SEE BACK.]



(ON BACK.)

This certificate refers only to proficiency. Testimonials of personal character hereafter would be required. It is requested that this certificate should be retained during the engagement by the employer, and that in case of dissatisfaction communication should at once be made to the Hon. Secretary of the Medico-Psychological Association.

*Paper to be signed by a successful Candidate before receiving
the Parchment Certificate.*

I agree to the provisions that my certificate should be retained by my employer during the time of my service under him, and that the certificate shall be forfeited if my conduct should be proved in the opinion of the Council of the Medico-Psychological Association to render me unworthy to continue to hold it.

Signed, _____

Finally, the Committee purposes to suggest to the Council that a printed copy of this report be sent to every member of the Association with the notice of the next General Meeting, so that the members will have beforehand a full knowledge of details, and will thus be enabled to come to such a determination as they may think fit.

(Signed) H. HAYES NEWINGTON,
President of the Association, and
Chairman of the Committee.

A. CAMPBELL CLARK,
T. S. CLOUSTON,
BONVILLE B. FOX,
M. D. MACLEOD,
CONOLLY NORMAN,
GEO. H. SAVAGE,

J. BEVERIDGE SPENCE,
S. A. K. STRAHAN,
A. R. URQUHART,
E. B. WHITCOMBE,
D. YELLOWLEES.

FLETCHER BEACH,

Honorary General Secretary.

PART II.—REVIEWS.

Forty-fourth Report of the Commissioners in Lunacy, 1st July, 1890.

The keynote of this report is given by the changes which have recently been made in the law relating to lunacy by the passing of the "Lunacy Acts Amendment Act, 1889," and the subsequent "Lunacy Act, 1890," both of them measures of phenomenal importance to the public generally, and especially to those who are engaged in the care and treatment of the insane.

By the last of these enactments the various Acts which have been passed from time to time have been consolidated, and for the first time it is possible to ascertain with reasonable ease and precision the relation of the law to the several classes of patients, and to those who are responsible for its due observance.

With reference to the first of these changes in the law, the Commissioners in Lunacy speak with no uncertain sound, and their opinions will be widely re-echoed by those who are exposed to its incidence, and are able to form skilled opinions as to the effect of its operations.

They thus speak of the two principal features of the new Act, viz.: (1.) The change in the mode of placing insane persons under legal detention for care and treatment as private patients, and (2) the provision that in future the authority for the detention of all insane persons shall be terminable at various periods unless renewed by a prescribed process. As regards the first of these, they say; "The views of our Board and those of our late Chairman, the Earl of Shaftesbury, as to the inexpediency of this change, notwithstanding that it had been recommended by a Select Committee of the House of Commons in 1878, were made known to your Lordship, and to your Lordship's predecessors in office, when it was proposed to include it in an Amendment Bill. We hope, however, that the change (in which also is involved a more complicated and difficult procedure for obtaining the order) may not lead to the results we fear, namely, the placing an impediment in the way of early treatment, so important for the cure of insanity, and the with-

drawal from official cognizance and supervision of many insane persons." That the latter is at present done to a considerable extent may be inferred from the discrepancy between the census returns and those to the lunacy office, which at the last census showed a difference of upwards of 11,000 persons. And it is not likely that this will diminish with the increased publicity and complexity of the new procedure, and the consequent greater reluctance to adopt it which has already manifested itself. It is also unfortunate, under these circumstances, that when clear cases of infraction of the law are brought before magistrates or the superior courts, there should be so obvious a disposition to minimize the offence, and either dismiss the cases altogether, or impose the most inadequate penalties.

As regards the second provision, the Commissioners remark: "This provision may, in large pauper asylums, insure a more careful consideration, at fixed intervals, of the mental condition of patients who possibly might otherwise, amid the crowd, escape such critical examination, but it is not within our actual experience that such cases occur. The provision will add much to the work of the managers, and very greatly indeed to that of our department." And they might have added that the section of the Act has apparently been framed with a view to make confusion worse confounded by the varying periods at, and the limited time within, which these prescribed reports are to be made.

With reference to the statistics of the year, the Commissioners state that the total number of persons of unsound mind under official cognizance in England and Wales on the 1st January last, was 86,067, being an increase of 1,727 as compared with the 1st January, 1889.

Their classification and distribution are shown in the summary on next page.

These figures show a decrease of 12 male and an increase of 137 female *private* patients; an increase of 538 male and 1,087 female *pauper* patients; and a decrease of 22 male and one female of the criminal class.

The proportion of total lunatics to population has risen to one in every 341.

The Commissioners are able to give a satisfactory opinion, borne out by figures, with respect to the increase or otherwise of occurring insanity disproportionately to the gradual increase of population. "It will be seen," they say, "by

Where maintained on 1st January, 1890.	Private.			Pauper.			Criminal.			Total.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
In County and Borough Asylums	428	503	936	23,267	28,643	51,910	73	18	91	23,768	29,169	52,937
In Registered Hos- pitals	1768	1640	3408	119	83	202	1	—	1	1888	1723	3611
In Licensed Houses —Metropolitan...	823	818	1641	400	527	927	—	—	—	1223	1345	2568
Provincial ...	587	807	1394	294	288	582	3	—	3	884	1095	1979
In Naval and Mili- tary Asylums ...	250	20	270	—	—	—	—	—	—	250	20	270
In Criminal Asylum —Broadmoor ...	—	—	—	—	—	—	468	152	620	468	152	620
In Workhouses— Ordinary Work- houses	—	—	—	5292	6834	12,126	—	—	—	5292	6834	12,126
Metropolitan Dis- trict Asylums ...	—	—	—	2696	3003	5699	—	—	—	2696	3003	5699
Private Single Pa- tients	184	262	446	—	—	—	—	—	—	184	262	446
Out-door Paupers	—	—	—	2306	3505	5811	—	—	—	2306	3505	5811
	4040	4055	8095	34,374	42,883	77,277	540	170	715	38,959	47,108	86,067

reference to the figures, that the ratio per 10,000 of the population of admissions into establishments for the insane and into single care (excluding transfers and admissions into idiot asylums), though there have been fluctuations, is not higher now than it was in 1881. This table, in fact, continues to support the opinion expressed by us in the thirty-sixth and other subsequent reports, that the increased number of the insane *under treatment* is due almost entirely to the accumulation of pauper patients in asylums, and is not owing to any material production of fresh insanity disproportionate to the yearly increase of the population."

The table itself is interesting, and we give a summary of it, together with a summary of another table, showing the ratio of pauper and private lunatics in asylums to population.

The last two columns in the following table show, as stated by the Commissioners, how almost entirely the increase in the

proportion of lunatics to population, since 1869, has been among persons of the pauper class.

Years.	Ratio per 10,000 of admissions to population, including transfers and admissions into idiot asylums.	Ratio per 10,000 of private lunatics to population.	Ratio per 10,000 of pauper lunatics to population.
1869	4·71	2·61	21·03
1879	5·16	2·97	24·30
1880	5·15	2·88	24·90
1881	5·18	2·85	25·22
1882	5·15	2·88	25·53
1883	5·41	2·88	25·79
1884	5·27	2·82	25·89
1885	4·85	2·80	25·71
1886	4·87	2·76	25·65
1887	5·06	2·72	25·91
1888	5·16	2·75	26·07
1889	5·18	2·75	26·27

The recoveries, calculated upon the nett admissions, after excluding transfers and admissions into idiot establishments, were 38·81 per cent. for 1889, as compared with 38·71 per cent. for 1888. The deaths bore the proportion to the daily average number resident of 9·81 per cent., which is almost identical with the rate for 1888.

As bearing upon these results of treatment, it is interesting to notice that, whereas in the 10 years from 1879 to 1888 the average percentage of male general paralytics admitted into asylums was 13·7, the proportion had risen in 1888 to 15·1.

The report contains an excellent series of tables showing the occupations, ages, and social conditions of those admitted, and the apparent causes of their attacks, and this year, for the first time, these particulars are summarized for the last 10 years. The tables are too long for insertion here, but they will well repay attentive consideration.

There is still no table showing the causes of death, which would be interesting. The deaths from suicide were 19 during the year, and nine were due to suffocation in

epileptic fits. From the copies of entries made by the Commissioners at their visits to asylums, which are given as an appendix, as well as from their remarks in the text, it is obvious that there is no falling off in the care and attention which insane patients are receiving at the hands of those to whose charge they are committed, and that, while in all classes of asylums a higher standard of requirement is being set up, those who are responsible for their management show every disposition to reach it by a wise and liberal co-operation.

The whole report gives ample assurance that the Commissioners in Lunacy are so continuing to discharge the onerous and important duties of their office as to entitle them to the confidence and best thanks of the public.

An Epitome of the Synthetic Philosophy of Herbert Spencer.
By F. HOWARD COLLINS (Williams and Norgate).

In our first brief notice of this work we stated the author's intention of giving in a brief form the general principles of Mr. Spencer's philosophy as far as possible in his original words. As a consequence, the Synthetic Philosophy is represented in much reduced proportions.

In the preface Mr. Herbert Spencer has still further epitomized in three pages by a series of highly abstract propositions the subject-matter originally occupying many volumes. It is obvious that such a work cannot with advantage be studied in large portions at once, so we purpose to give a brief outline of the subject-matter of the "First Principles" and "The Principles of Biology"—leaving for future consideration the Principles of Psychology, Sociology, and Morality. The "First Principles" embrace (1) the unknowable, carrying a step further the doctrine put into shape by Hamilton and Mansel; pointing out the various directions in which science leads to the same conclusions, and showing that in this united belief in an Absolute that transcends not only human knowledge but human conception, lies the only possible reconciliation of Science and Religion; and (2) the knowable, a statement of the ultimate principles discernible throughout all manifestations of the absolute—those highest generalizations now being disclosed by Science, which are severally true, not of one class of

phenomena, but of all classes of phenomena; and which are thus the keys to all classes of phenomena. The reasonings in the Philosophico-Religious doctrine enunciated afford no support to either Materialist or Spiritualist respecting the ultimate nature of things. The interpretation of all phenomena in terms of Matter, Motion, and Force is held to be nothing more than the reduction of our complex symbols of thought, to the simplest symbols; and nothing more than symbols. The detailed phenomena of Life, Mind, and Society, in terms of Matter, Motion, and Force, are dealt with subsequently. Here a right interpretation would show that though the relation of subject and object renders necessary to us the antithetical conceptions of spirit and matter, the one is no less than the other to be regarded as but a sign of the unknown Reality which underlies both. We are obliged to regard every phenomenon as a manifestation of an unlimited and incomprehensible Power. In this conclusion Religion becomes reconciled with Science.

The application of these First Principles to Organic Matter is alone dealt with, as being of more importance and not so extensive as to Inorganic.

The Data of Biology include those general truths of Physics and Chemistry with which rational Biology must set out, and we have presented to us the general character of the vital functions, and of the Matter in which they are performed.

The subject-matter of the Science of Biology is further divided into accounts of:—

1. The Structural phenomena presented by (a) individual organisms, and (b) by succession of organisms (interpreted by Morphology and Embryology).

2. The Functional phenomena presented by (a) individual organisms, and (b) by succession of organisms (interpreted by Physiology and Psychology).

3. The action of Structure on Function, and the reactions of Function on Structure: presented by (a) individual organisms, and (b) by successions of organisms.

4. The phenomena attending the production of successions of organisms: in other words, the phenomena of Genesis.

In these sections we have an account of all the conditions, concomitants, and consequences under the various circumstances fallen into by living bodies.

The Inductions of Biology furnish us with a concise account, and further development, of the leading generalizations which naturalists, physiologists, and comparative anatomists have established; with such deductive interpretations as *First Principles* furnish. The speculation commonly known as "The Development Hypothesis" in relation to the Evolution of life is treated in its *à priori* and *à posteriori* evidences. The general aspects of the hypothesis as to *special creation* and *evolution* lead, by its derivation, coherence, analogies, direct evidence, and implications, to a commendation of the latter to us; and special phenomena of development, as displayed in the structure of functions of individual organisms, give numberless additional vouchers for the truth of the hypothesis of evolution. In the problems of Morphological development are pointed out the relations that are everywhere traceable between organic forms and the average of the various forces to which they are subject; and in the cumulative effects of such forces is sought a theory of the forms. The proposition arrived at when dealing with the Causes of Evolution, "that in the actions and reactions of force and matter, an unlikeness in either of the factors necessitates an unlikeness in the effects; and that in the absence of unlikeness in either of the factors the effects must be alike" ("First Principles," § 169), is the general formula including all those particular likenesses and unlikenesses of parts previously traced; and it is held to be an inevitable deduction from the persistence of force, that organic forms which have been progressively evolved must present just those fundamental traits of form which they do present.

In the problems of physiological development the progressive differentiation of functions is similarly traced; and similarly interpreted as consequent upon the exposure of different parts of organisms to different sets of conditions. From the consideration of these universal laws, we find ourselves again brought down to the persistence of force, as the deepest knowable cause of those modifications which constitute physiological development; as it is the deepest knowable cause of all other evolution.

From the Laws of Multiplication we have generalizations respecting the rates of reproduction of the various classes of plants and animals; followed by an attempt to show the dependence of these variations upon certain necessary causes.

Any further evolution in the most highly-evolved of terrestrial beings, Man, must be of the same nature as evolution in general. It must be an advance towards completion of that continuous adjustment of internal and external relations which was shown to constitute Life. Changes numerical, social, organic, must, by their mutual influences, work unceasingly towards a state of harmony—a state in which each of the factors is just equal to its work.

And this highest conceivable result must be wrought out by that same universal process which the simplest inorganic action illustrates.

A clear preliminary conception of Mr. Spencer's Principles is thus readily obtained, and this epitome by Mr. Collins is admirable, and ought to facilitate comprehension and prepare the way for the study of the more elaborate conceptions contained in the original works.

On Unsoundness of Mind in its Legal and Medical Considerations. By J. W. HUME WILLIAMS, of the Middle Temple, barrister-at-law. William Clowes and Sons, Limited, London, 1890. pp. 256.

“Can any good come out of a prize essay?” is a question which literary scepticism is never weary of asking, and which admits of no better, and, indeed, no other, answer than the old practical invitation “Come and see.” Mr. Hume Williams is to be congratulated upon having added one more to the rapidly accumulating and convincing proofs that a piece of literary work may attain academic distinction, and yet be well worthy of the consideration of thoughtful men. This book, which, in the language of the author, “purports to combine the Sudgen prize essay on Hypochondriacal Insanity, and a similar essay, second in degree, on Unsoundness of Mind in relation to the question of responsibility for criminal acts,” is the most philosophic contribution which the law has yet made to the medical jurisprudence of insanity. In its present form it consists of five essays, dealing successfully with the legal test of lunacy, monomania, moral insanity, impulsive insanity, and the criminal responsibility of the insane. Setting out with a

clear grasp of the distinction between *ethico-legal* considerations, which are capable of being determined by all admittedly rational men, and "belong to the jury," and *psycho-ethical* considerations, which fall within the peculiar province of the physician, the author enunciates a proposition of cardinal importance with reference to the true scope of judicial inquiry in every case of disputed soundness of mind. "The question to be determined in psychical investigations is not whether certain phenomena indicate the soundness of the mind or morals of all men, but how far they may enable physicians to estimate their relative condition in a particular individual." If any apology for the appearance of this book were needed, the writer's statement of, and insistence upon this doctrine would supply the deficiency. Mr. Williams is justly severe upon the "rules in MacNaghten's case" (p. 7). "To say that a knowledge of right and wrong entails on the one hand the capability of acting according to that knowledge, or, on the other, indicates a sane state of mind in reference to those acts respecting whose nature that knowledge is evinced, and therefore involves responsibility for crime, is to contradict the dictates of medical reason, and opposed to the admitted evidence of legal experience." Besides its delimitation of the respective provinces of the judge, the jury, and the physician in cases of mental alienation, and its assertion of the principle that the best criterion of insanity, even for legal purposes, is "to compare a man with himself," Mr. Hume Williams' essay contains other features of interest—an acute analysis of the characteristics, and a discussion of the juridical consequences, of monomania, and of moral and impulsive insanity, an examination of the *causes célèbres* of English and Continental alienism, and a humorous account of spiritualism and of the literature of witchcraft.

It has been said that in true criticism there should ever be "an element of the insight which begets prophecy." In the exercise of this divine gift, which we humbly conceive that we possess in sufficient measure to justify the prediction, we foretell that Mr Hume Williams' essay will speedily reach a second edition; and we venture, in no carping or captious spirit, but out of a simple desire to see its value enhanced, to say boldly the few things which we have against him. The teacher of psychology, says Cardinal Newman, can hardly fail at times to be obscure; and—the all-pervading

crystalline clearness of the *Grammar of Assent* notwithstanding—we bow to the great doctor's authority. But the teacher of psychology should be grammatical; and we regret to say that Mr. Williams' lapses from accuracy in this respect, though certainly exceptional, are by no means trifling. On p. 34 we read of "the *logic acumen* of many wholly ignorant of medical matters." On p. 63 we are told that "in 1785 a woman in Northampton *was swum* for a witch;" while on p. 25 occurs the following passage, over the analysis of which Macaulay's "fourth form boy" might stumble, unwhipped: "The scientific treatment of mental disease *leads* to the study of the relations of the mind to the cerebral structure as the means through which its operations are manifested; *to regard* the brain as the organ of, not the seat of, thought; by reasoning on various pathological facts which experience has collected *to consider* similar facts as so far important for the establishment of particular relations; and, at the same time, *not to preargue* an absence of those pathological conditions, because peculiar phenomena may not be sufficiently or prominently present."

Again, we question whether Mr. Hume Williams is as well abreast of modern legal—as he clearly is of modern medical—opinion with reference to the capacity and responsibility of the insane. Only within very narrow limits is it true that "Law demands a fixed rule—medicine admits but a general principle" (p. 2): the current of recent case-law flows strongly against this assertion; and "the rules in MacNaghten's case," condemnable as they are, have been made workable and humane by a series of glosses, which are vastly more important than the text. It will be well if, in the next edition of his admirable essay, Mr. Williams places before his readers a complete exposition of the law of insanity before setting about to criticize it.

Having said thus much, we commend this book to all who are interested in its subject matter as a suggestive and original treatment of perhaps the most complicated problem, towards the solution of which the endeavour of earnest souls can be directed.

Spinal Concussion: Surgically considered as a cause of spinal injury, and neurologically restricted to a certain symptom group, for which is suggested the designation "Erichsen's Disease," as one form of the traumatic neuroses. By S. V. CLEVINGER, M.D. 8vo., pp. 359. F. A. Davis, 1889.

The author of this work very justly opens by remarking that the cases in which spinal concussion is alleged to have occurred give rise to some of the heaviest claims for damages. They are pre-eminently the cases in which medical aid is required to enable a jury to render a just verdict; but unfortunately they are the cases of all others in which medical testimony is most liable to be conflicting, because the symptoms are all subjective, and it is very difficult under the conditions of examination to form a correct judgment as to the reality of the patient's sufferings. Dr. Clevenger takes up the cudgels with great warmth and energy for Erichsen, and uses them freely and frequently upon Page, without, in our opinion, inflicting much injury upon the latter author. He has picked out all the symptoms occurring in a number of cases of supposed spinal concussion, thirty-one in all, and regards this "symptom-group" as characteristic of the malady, and a most heterogeneous one it is. There is no thread running through it to bind the symptoms together—though Dr. Clevenger thinks he has found a clue in the new pathology he suggests—a lesion of the sympathetic system.

Everybody who has written upon the subject is quoted largely, whole papers being translated. Obviously this must lead to a good deal of repetition. To add to the wearisomeness of this, every opportunity is taken to make an excursion into some neighbouring territory. Thus a long chapter is devoted to the view that traumatic insanity is a specially characterized variety; and elementary instruction is given in electro-diagnosis. On the whole the book does not impress us favourably. There is a great deal too much padding, too much needless (as it seems to us) digression; and the author fails to convey to us any clear idea of what spinal concussion is.

L'Uomo di Genio. By CESARE LOMBROSO, Turin, 1888. Fifth Edition.

L'Homme de Génie. By CESARE LOMBROSO, Paris, 1889 (Alcan's Bibliothèque de Philosophie Contemporaine).

The various editions through which this book has passed have resulted in a work which is not only much larger than the original volume, but in many respects much unlike it. Never before, Prof. Lombroso tells us, has he had in the latest edition of a book to disavow so much in the preceding editions. Even the original title (as he neglects to remark) has given place to a new one. The first title—"Genius and Insanity"—was, however, perhaps more suitable. The book still deals chiefly with those men of genius and those characteristics of men of genius that are most insane in character, and at the same time with those insane and semi-insane (*Mattoidi*) persons who seem to have some resemblance to men of genius. The book is thus written on the same lines as most previous attempts to explain genius—attempts which have nearly always come from writers who were chiefly familiar with insanity, and who have thus, perhaps, been to some extent biassed. That is to say, that they have rejected usually those aspects of the subjects dealt with which, from the standpoint adopted, could not be explained. With this general deduction, it must certainly be said that Lombroso's book is by far the most rich, comprehensive, and fascinating collection of facts and generalizations concerning genius which has yet been brought together.

Lombroso sets out by bringing forward various generalizations as to the prevalent physical and psychical characteristics of men of genius, supported by copious illustrations. Thus he finds that they are usually short, and not uncommonly pale. Rickets he finds common, and among the rachitic he mentions *Æsop*, *Galba*, *Tyrtæus*, *Agesilaus*, as well as *Brunelleschi*, *Scarron*, *Talleyrand*, *Goldsmith*, *Scott*, *Pope*, and *Byron*. The diagnosis seems to be a little rash in some of these cases. Baldness and leanness are both common; there is frequently muscular and sexual weakness. Lesions of the brain and skull and cranial abnormalities are very common. Stammering is common. So, also, to some extent, is left-handedness. The sterility of men of genius is

remarkable ; and a long list of very eminent men have never married. Lombroso finds that in physiognomy they are frequently very unlike father or mother, and also remote from the national type. The precocity of genius is compared by Lombroso to that of the morally insane, and also of savages. On the other hand, many men of genius have in childhood shown less than average intelligence. In matters outside their own field men of genius frequently show, in a very marked way, what Lombroso calls "misoneism"—the hatred of novelty. Thus Schopenhauer, a rebel in philosophy, had nothing but contempt for political rebels ; Bacon laughed at Gilbert and Copernicus ; Napoleon rejected steam ; and Darwin refused to believe in hypnotism. Another characteristic of men of genius is the spontaneity, often unconscious and inexplicable, of their creations—their "inspiration." They produce by a natural instinct ; as Lamartine used to say : "*I do not think ; my ideas think for me.*" Poets have sometimes composed in a state of sleep or of somnambulism. During their states of inspiration, poets sometimes resemble persons in a state of mania (*Aut insanit homo, aut versus facit*), and have occasionally been insensible to severe wounds. While at such moments seeming to soar above ordinary humanity, they often sink below it. Several men of genius have said that they seemed to themselves to possess a double personality, and they have perpetrated, times without number, incredible stupidities. By studying the autobiographies of men of genius, Lombroso finds that they are characterized by extreme hyperæsthesia ; he brings forward a great deal of evidence under this head. Amnesia is another characteristic concerning which many stories are current.

Lombroso next proceeds to show the connection between genius and various distinct neuroses—chorea, epilepsy, melancholia, *manie des grandeurs*, *folie du doute*, alcoholism, moral insanity, etc. Julius Cæsar, Dostoieffsky, Richelieu, Petrarch, Molière, Flaubert, Charles V., Peter the Great, and Handel were subject to epilepsy ; and Lombroso also includes St. Paul, on the strength of the episode on the road to Damascus, the temperament and style of the apostle being also found to agree with this theory. Mahomet also had attacks of an epileptic character. Melancholia is very common, and the number of men of genius who have committed suicide is, as Lombroso remarks, almost endless. Hamlet is a perfect and classical expression in art of *folie du*

doute, which, in some form or other, has existed in a large number of men of genius—Flaubert, Renan, Tolstoi, Amiel, Manzoni, etc. Hallucinations are very common. So also is that defect of moral sense which is often called “moral insanity.”

In the next chapter Lombroso gives longer or shorter accounts of men of genius in various fields, and from various countries, who appear to have shown signs of insanity; among others, Vico, Harrington, Haller, Ampère, Dolce, Lee, Schumann, Gerard de Nerval, Baudelaire, Mainländer, Comte Cardan, Tasso, Swift, Newton, Rousseau, Lenau, Hoffmann, Gogol, Schopenhauer.

So far Lombroso has been dealing with the physiology and pathology of genius. In Part II. he turns to the ætiology of genius. He brings forward a number of ingenious and sometimes somewhat laboured considerations under this head. Thus, there is a chart founded on the examination of the dates at which 24,000 lunatics entered the asylum, and of the month when nearly 2,000 works of genius were produced, to show the influence of hot weather in both cases. From this chart it appears that insanity in Italy is at its maximum in June; in France in May; and that the maximum of works of genius is produced in May; the minimum in February; while there is a second rise in September. He also brings forward evidence to show that the state of the barometer must be taken into consideration; but differences in weather are by no means so important as differences in temperature.

To the influence of race in the production of men of genius Lombroso seems to attach little importance; on the other hand he attaches great importance to the climatic and atmospheric conditions of a country or district. He has made a list of several hundred Italian musicians, and finds that they abound specially in healthy, hot, maritime, and, above all, elevated regions, these influences seeming to fight against the influence, also great, of large centres of civilization. He allows some influence to the Greco-Etruscan race of Italy. Flat countries, like Belgium, Holland, and Egypt, are deficient in men of genius; in marshy countries, and in regions like Savoy and Switzerland, where the mountains are very high, and the inhabitants live in narrow valleys, the deficiency is still more marked. Most of the Swiss men of genius are of French or Italian ancestry; Florence, a town of hills and of mild temperature, has furnished Italy with

her greatest men; the neighbouring Pisa, a city of the plain, has produced very few. Another chart shows an interesting relation between the average height of the population and the frequency of the men of genius, as illustrated by the French Departments. Although men of genius are usually short they are most frequent among tall populations; thus, Doubs, which, according to Broca, stands first in regard to height, stands second in regard to frequency of genius (first, if we exclude Paris); and Charente, which stands last in the list of genius, is last but four in the list of height. "All this shows," remarks Lombroso, "that genius will only flourish in wholesome air." At the same time he connects the frequency of genius in hilly regions with the proverbial frequency of madness among mountains.

In the next chapter race and heredity are considered in their relations to genius, but Lombroso has here very little that is new to bring forward. In opposition to Galton he is not prepared to accept the heredity of genius, except in a very modified form, and even this is often much exaggerated by the prestige attaching to a great name.

Part III. is chiefly devoted to genius, literary or artistic, in the insane, with copious illustrations, and also to those persons who are on the borderland between insanity and genius. Here Lombroso is on very familiar ground, and all that he has to bring forward cannot fail to be of interest to all students of morbid psychology. At the same time it does not always throw any great light on the nature of genius.

Part IV. is devoted to synthesis. Lombroso endeavours to show that genius is a degenerative psychosis of epileptoid character. A vast mass of details is brought together from very various sources to support this position; and the moral drawn at the conclusion of this very learned and curiously interesting book is that we should respect the supreme misfortune of insanity, and not be too much dazzled by the light of genius, which is often not that of a planet, but of a falling star.

HAVELOCK ELLIS.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Retrospect.*

Therapeutic Memoranda. By HARRINGTON SAINSBURY, M.D.,
M.R.C.P., Physician to the Royal Free Hospital.

In the "Practitioner" for May of this year a lecture by Prof. H. C. Wood, on the value of digitalis, is referred to. Digitalis is there spoken of as a cardiac food, and that it merits a high position on the list of drugs, which may be so classified, none can doubt. Not only, however, does digitalis act directly upon the heart, but indirectly (this follows as a matter of course) it influences for good the tissues generally, and more particularly certain organs. The kidneys readily respond, under certain conditions, to its action, and "the diuretic effects flow in a kindly manner," to quote Dr. Withering. The brain feels its influence, and a more controlled flow of blood through its substance shows itself by a quieter behaviour of the grey matter, and in many instances by sleep. The quieting action of digitalis is well recognized by alienists, and the combination of digitalis tincture with bromide of potassium is a familiar one. The treatment, further, of delirium tremens after the manner of Mr. Jones, of Jersey, has been sufficiently tested to establish the value of these very large doses (one half-ounce does of the tincture) in controlling the delirium and inducing sleep. In spite, however, of all the work that has been done, digitalis is handled in a very tentative and feeble way by practitioners—the fear of its "cumulative" action is ever present with them. Under these conditions it is well to lay stress on the signals which tell us when the organism is in distress from the action of the drug. They are: failure of pulse, diminution in the flow of urine, nausea, and vomiting. So long as the pulse is gaining in force and regularity and diminishing in frequency; so long as the urine is flowing well, we may be happy, though we are pushing the drugs. Should, however, the pulse begin to falter, and show further failure by an increased frequency, or should it abruptly fall to 50, 40, or even fewer beats per minute (a rare event), we must withhold. These symptoms have the greater significance if the urine fail, and, indeed, apart from any pulse change, a diminution in the flow of urine would make us watch much more carefully the pulse. Dr. Balfour insists on these precautions when we are giving large doses of digitalis, and it may be laid down as a rule that when we are giving such doses the urine must be measured. The patient should be kept recumbent. The alienist, when using digitalis, must remember that it is primarily a heart drug, and that he must therefore primarily

watch the circulation. Nausea and vomiting sometimes compel us to stop the giving of digitalis.

Iodide of Potassium.—This drug is so universally employed that it is essential that we should know its effects, even the most uncommon. Dr. Groenouw, of Breslau, reports two cases of acute œdema of the glottis occurring during the use of potassium iodide. He refers to several others which have been reported, in some of which death occurred by asphyxia before tracheotomy could be performed; whilst in others tracheotomy was the means of saving life. Foerster, Fournier, Fenwick, Malachowski are cited as reporting cases of this kind. In the recorded cases œdema of the glottis does not appear to have resulted from either the prolonged use of the drug or from massive doses. In some cases it occurred within a few hours, in others, the majority, during the first two days—in one case not till the sixth day. The total quantity which had been taken when the symptoms arose varied between three grains and fifty-four grains (in one case only had the total quantity been 200 grains). Other symptoms of iodism, except perhaps headache, may be completely absent. The effects could not be attributed to impurities of the drug, nor to local or general disease present at the time of the administration. They could only be referred to idiosyncrasy. Patients showing this idiosyncrasy may acquire tolerance of the drug. Since the majority of cases happened during the first few days of the iodide-cure, it is at this stage that careful watching will be able to detect the first indications of trouble, and avoid further complications. (“Therap. Monatshefte,” March, 1890).

Hallucinations and distinct insanity are reported by Dr. Oliver Belt to have followed the use of atropine drops—one drop of a four-grain-to-the-ounce solution used thrice daily. The symptoms set in after the seventh instillation. Flushing of the face and rapidity of pulse, with dilatation of the pupil of the sound eye, were observed. The total quantity used will have been $1\frac{7}{20}$ grain, and it will have been spread over $2\frac{1}{3}$ days. The patient got well on discontinuing the drug and administering morphine (“Practitioner,” June, 1890, quoted from the “Philad. Med. News,” April 5, 1890). We would remark that, unless the doctor himself administered the drops, it is possible that more than one drop was used each time.

Borax in Epilepsy.—In the “British Medical Journal,” Vol. i., 1890, p. 901, Dr. Stewart gives the results of experiments with borax in epilepsy. He finds the drug useful where the fits are chiefly nocturnal. In two cases the results certainly are striking, but in five others they are very doubtful. Results upon so small a scale are of correspondingly small value, but on the occasional value of borax in epilepsy we have the testimony of Gowers and of Folsom—the dose recommended by these authors is 10 to 15 grains three times a day.

Hypnal is a recently introduced hypnotic. It is obtained by

bringing together in solution chloral and antipyrine. If these solutions be concentrated a crystalline substance separates, which has received the name of Hypnal. First described by M. Bonnet, of Dreux, it has been further experimented with by M. Bardet. The drug possesses hypnotic and analgesic powers. The efficient dose is 15 grains, but 30 grains may, though rarely, be required. Hypnal possesses a definite chemical structure, which, it is to be hoped, is more simple than its scientific name, viz., trichloracetyl-dimethyl-phenyl-pyrazolone. M. Bardet points to the smallness of the effective dose, and suggests that each ingredient heightens the action of the other, the resultant hypnal possessing the soporific powers of chloral and the analgesic powers of antipyrine—*cf.* “Nouveaux Remèdes,” March 24, 1890. M. Bardet experimented on 22 patients. These results have been confirmed by M. Fraenkel (“Nouveaux Remèdes,” August 8, 1890). The drug now receives the name of Monochloral antipyrine. In the presence of weak alkalies, therefore, in the blood, the compound is broken up to form again chloral and antipyrine.

The “Practitioner” for August, 1890, refers to the report of Drs. Hitzig and Alt on the elimination of morphine by the mucous membrane of the stomach after the drug had been injected *hypodermically*. In $2\frac{1}{4}$ minutes after the hypodermic injection of morphine, it could be detected in the stomach. Dogs who had received 50 per cent. more morphine hypodermically than the usual fatal dose were saved by washing out the stomach. One third of the morphine was recovered in this way within 20 minutes. It is pointed out that in cases of swallowing of morphine in toxic dose it is quite possible that the stomach, even after the evacuation of its contents, will secrete the drug in further quantity. This report is an important contribution to toxicology.

Chloralamide.—Dr. Gustav Genersich reports a number of cases of insomnia treated with this drug. His conclusions are:—1. That chloralamide is a hypnotic, and only in larger doses a narcotic; he even throws doubt upon its narcotic action, for in cases of sleeplessness from pain it did not produce sleep. 2. It acts in doses of 30 grains, but 45 to 60 grains are more certain doses; these larger doses will cause sleep during the daytime. 3. The drug is most efficient in cases of nervous insomnia, but may be tried in all forms of sleeplessness. 4. By-effects are but slight, though the larger doses may cause headache, giddiness, nausea. Genersich did not get good results in cases of advanced phthisis with insomnia (“Centralblatt für die gesammte Therapie,” August, 1890). It will be remembered that it is claimed for chloralamide that the introduction of the group NH_2 , amidogen, gives it a less depressant action than belongs to chloral itself.

2. American Retrospect.

BY FLETCHER BEACH, M.B., F.R.C.P., Darenth Asylum, Kent.

American Journal of Insanity, January, 1890.

Alienist and Neurologist, April, 1890.

Quarterly Journal of Inebriety, January and April, 1890.

Journal of Nervous and Mental Disease, April, 1890.

The "American Journal of Insanity" keeps up its reputation as the oldest Journal in America devoted especially to insanity.

The first paper is one by Dr. Dodding, on "The State in the care of its Insane." It appears that a Committee had been formed to consider the subject, but owing to various occurrences had been unable to meet; the opinions given are those of the writer only. In America complete provision is not made for the insane, and the author details what he considers the best methods of dealing with the subject. It seems that the insane in the United States are increasing out of proportion to the increase in population. Taking the ratio of increase in New York as an example, we find that the United States census of 1880 showed an average of one insane person to every 545 of the population; and it is presumed that the census of 1890 will show an average of one to every 450. The State that undertakes to make suitable provision for its dependent insane must supply accommodation for one in every 400 of population at the start, and be prepared to annually increase that accommodation by 125 beds for every million of population. The author looks forward to the near future, when more than one State hospital will be found "with its broad fields interspersed with groves and cottages and villas, its groups suited to every want and condition, and new structures springing up as their need is shown." Such institutions will no doubt, in time, be more common in England.

Dr. Stedman contributes a paper on "The Family, or Boarding-out System—its uses and limits as a provision for the Insane." This department of lunacy administration is still in its infancy in America, the only State where the experiment has been made being Massachusetts. The author had been requested to visit this institution, and the paper gives an account of what he saw there, with his observations thereon. What is wanted is to give to a number of chronic harmless patients, who no longer need confinement in an asylum, a domestic life, by boarding them out in families under State supervision, at the same time relieving the asylums from over-crowding, and giving more room for acute cases requiring cure or improvement. In Scotland 22 per cent. of the registered pauper insane are

comfortably and economically boarded out, but in Massachusetts the measure has not made much headway, owing to the fact that until last November medical supervision by an experienced alienist was wanting. Four classes of homes were found in this State; in the best, the surroundings were unexceptionable as to the housekeeping, comfort, and contentment of the patients; in the worst, the surroundings were extremely poor, and the patients were neglected by those in charge. As a rule, no evidence of undue neglect was found, and the housewives, the guardians of the insane, impressed him as being desirable persons for the work in the great majority of the families. The usual objections to boarding-out, viz., the liability to improper treatment, the imposition of drudgery and perhaps actual abuse, are discussed, and the economic aspects of the question are fully considered. The system does not seem to make much more headway in America than in England.

"*Wrinkles in Ancient Asylum Reports*," is the title of an amusing paper by Dr. Daniel Clark. When Rameses I. and II. were exhumed some time ago from their sarcophagi, their mummies were found wrapped in interesting asylum records, which have been translated by a friend of the author. It appears that the land of the Pharaohs was divided into three great provinces, named Europa, Americanus, and Canadensis. They were full of insane and mentally defective people; the manuscripts show that on an average one in every 450 persons was incapable. The Egyptian superintendents were thorough in their work, and were men of high executive ability. Not only did they give various nostrums, "but they had to see when a mess of pottage was boiled enough; how much water belonged to milk; why the bread made from flour of excellent wheat had more specific gravity and less porosity than was good for digestion." They had to nose out every smell, to be expert judges of horses, to be *au fait* in distinguishing the radical points of milch cows, and to study the various kinds of pigs. They were men of universal genius, for they were also botanists, vegetarians, mechanics, laundry and clothing connoisseurs. In the time of Rameses II., a medical system, based on scientific principles, sprung into existence. One philosopher asserted that all diseases were conquered by specific remedies, and a fierce controversy arose over this new doctrine. In one of the provinces a military man discovered a cure for insanity by putting the afflicted under blue glass. One has heard something of this kind of treatment of late years. "In one refuge for the insane in Canadensis, raisins were highly recommended for acute mania; they were prescribed in large quantities, and when the patient was well stuffed he became quiet." In the same principality a medical savant had investigated the ultimate elements of nature and warned his brethren of the bad effects of the ethyl series, a diffusible stimulant then much used, on brain tissue. In compiling the *per capita* cost of patients to the State, efforts were made to show a small outlay and thus prove economy and efficiency.

An animated discussion took place then as now on the personal restraint of patients, and between the same combatants the question of healthfulness in relation to work by the insane came to the surface. Some of the Egyptian asylum reports complain of the press of that day. They were classified as the good, the indifferent, the bad, the very bad, and the vile. The latter did all they could to bring public institutions into disrepute, but the first held up for approval all the faithful in the work of humanity.

Treatment of the Insane as related to Science, and general conditions of Humanity historically considered.

Dr. Everts refers to a statement made by Dr. A. D. White, late President of Cornell, who says: "Of all the triumphs won by science for humanity, none has been farther reaching in its good effects than the modern treatment of the insane." The paper is an endeavour to inquire into the truth of this question. Dr. Everts begins by tracing the treatment of the insane from the time of the Egyptians to the present day, and states the lines on which treatment is now pursued. He compares the general conditions of prehistoric humanity with those constituting modern civilization, and is of opinion that the most conspicuous characteristics of humanity at present are freedom and science. He concludes that "the treatment of the insane, as an affair of life, at any given time is a phase only of a general condition of humanity, and not a special result of an independent movement of whatever forces." He considers science as an inseparable feature of a general condition of humanity, and thinks that Pinel and Tuke, who inaugurated the modern treatment of the insane, were neither of them instigated to action as a champion of science, but simply from a feeling of humanity.

An interesting notice of the death of Dr. Charles H. Nichols, late Superintendent of the Bloomingdale Asylum, is given at the end of the Journal.

Mental relations of Heart Disease.

This is a paper published in the "Alienist and Neurologist," by Dr. Kiernan, of Chicago. It is well known that the types of insanity arising from cardiac disease are characterized by suspicion and emotional mobility, and Dr. Kiernan quotes several authorities in support of this. In such cases the treatment prescribed is naturally mental and physical quiet. This advice is usually observed for a time, but the suspicious state arising from the disease and the relief from the symptoms predispose the patient to believe that his physicians are mistaken in their diagnosis. Exuberant horse-play is indulged in, and the patient dies. These features are well illustrated in the case of Matthew Arnold, who called himself the "Apostle of Sweetness and Light." He had disease of the aortic valve, and by the advice

of Sir Andrew Clark he led a comparatively quiet life. The quietist philosophy, which he preached, no doubt had good results, and his training restrained all emotional peculiarities as "bad form." Of late years he had been less restrained, at times being cynical and anything but sweet, then becoming bland and buoyant. His buoyancy was always succeeded by horse-play, and in one of these conditions he attempted to jump over a gate and fell down dead. John Hunter illustrates the dyspnoëic type. He suffered from paroxysms of irascibility and died in one of them. The author believes that the buoyancy is as much a part of the disease as the murmurs, and instead of being encouraged by the patient's good spirits, he thinks an effort should be made to curb them as much as possible. Moral measures to restrain emotional displays and remedial measures to control the heart's action make up the treatment which should be adopted.

Neuric and Electric Forces.

Dr. John Schilling considers that our present knowledge of the relations of mind and body is unsatisfactory, and the paper is an attempt on his part to clear up the subject. To nerve-force he gives the name "Nervicity," and he thinks the problem of the near future will be to prove that electricity and nervicity are identical, that the former need only influence animal matter to become nerve force. He supposes nervicity to be composed of two parts, positive and negative, and that, like electricity, positive nervicity is repulsed by positive and negative by negative nervicity. "Similar to the production of electricity, the force of mutual attraction between positive and negative nervicity is antagonized and temporarily suppressed by both physical and chemical forces, and the union of positive and negative nervicity, or a nervical current, calls into existence again physical and chemical processes." Union of positive with negative nervicity occurs in the cells of the nervous system and constitutes various psychical and mental states. Union of positive and negative chemical nervicity occurs mainly in the striated muscular fibre causing contraction, and union of positive and negative physical nervicity causes the contraction of the fibre cell. Nervicity acts, not only on nerves and muscles, but upon all animal tissues, and preserves their vitality in a physical and chemical respect. Motion, sensation (muscular, general, and special) are then described according to the above theory, and its relations to emotions and the different attributes of mind are reserved for a future number.

"The Quarterly Journal of Inebriety" contains many interesting papers, among which may be mentioned "Drunkenness; its influence on the Mind," by Dr. T. L. Wright. He refers to the difficulty of engaging the attention of a man when intoxicated on account of his nervous sensibilities being enfeebled; whatever thoughts he has in his mind remain there in stubborn possession; and consequently his

ideas become fixed and he is pertinacious and tiresome. He is a wonderful egotist, and claims to occupy a station of the highest possible eminence, his punctilio in this matter varying with the increase in the number and size of his "drinks." Illusions, hallucinations, and delusions beset the soundest mind when under the influence of alcohol, for since the whole range of sensibility is deficient as well as distorted in the drunken man, it is evident that his mind must labour under many misapprehensions. The idea that he is somehow physically invulnerable is common, and he becomes filled with an indomitable and reckless courage until the inevitable time of reaction comes, when he is full of explanations and abasements, known in common language as the process of "crawling out of the small end of the horn." In regions where strong drink is habitually taken by the people in general, the unduly sensitive inebriate's honour is ever on the alert to detect insults; deadly weapons are carried, and the mother tongue is much employed in asseverations of willingness to die in defence of his honour. Alcohol in small quantities dims consciousness, and in large portions wrecks and destroys it.

Nineteenth Annual Meeting of the American Association for the Study and Cure of Inebriety.

At this meeting a report was presented by Dr. Bradner, Chairman of the Committee "On Nostrums, Proprietary Medicines, and New Drugs," from which we learn that nineteen out of twenty of the nostrums most commonly sold as opium cures were composed in part of opium itself, and that fifty different proprietary preparations sold for special usefulness in the reformation of intemperate habits, all contained alcohol in proportions varying from 6 to 47 per cent.

A complimentary dinner was afterwards given to Dr. Parrish, the President of the Association, and the speeches give an account of the progress of legislation for inebriety in America from the time when the cause was insignificant, the subject of indifference, ignorance, and ridicule, up to the present. Now inebriety is recognized as a disease, curable in the same sense as other diseases are curable, and hospitals have been established for its treatment.

The April number of this Journal is occupied by an address of Dr. Parrish, in reply to the speeches made in his honour at the meeting before mentioned; a sketch of his life by Dr. Shipman; and the "Study of Inebriety and its Relation to the Temperance Movement," by Dr. Norman Kerr, of this country.

Dr. Parrish's life is a very interesting one. It seems that he first established himself in practice in Burlington, the native city of his wife, and in 1847 set on foot "The New Jersey Medical Reporter," which before long became the official organ of the Medical Society of the State. In 1854, at the urgent request of the Philadelphia College of Medicine, he accepted the Chair of Obstetrics and Diseases

of Women and Children in that institution, but after one term he was obliged to resign it, on account of feeble health. In May of the following year he was suffering from a pulmonary complaint and sailed with his wife for Europe, returning twelve months afterwards with renewed health and intensified aspirations, and from that time he was occupied with organizing, administering, moulding, and inspiring various institutions. He first became Superintendent of the Training School for Idiots at Philadelphia, but in 1863 resigned that appointment and entered the United States Sanitary Commission, acting first as an inspector of the camps and hospitals in the neighbourhood of Washington. He was always to be found wherever suffering humanity had to be attended, and rendered invaluable services to both sides during the Civil War. At its close he originated the movement developing into "The Citizens' Association of Philadelphia," which in June, 1866, was incorporated by the Legislature of that State, for the purpose of establishing a society for the reformation of inebriates and for the moral and social elevation of the ignorant and neglected classes. Of this Association Dr. Parrish became the President, and he has ever since been actively engaged in propounding the principles for the treatment of inebriety at home and abroad.

Functional Nervous Diseases and their Relations to Gastro-Intestinal Derangements.

This is a paper by Dr. Thomson in the "Journal of Nervous and Mental Disease." He inquires whether there are any features which distinguish supposed functional nervous diseases from organic nervous diseases, and concludes that the one distinction of fundamental import is the absence of intermission in structural disease. On the other hand a truly intermittent disease cannot have an organic basis in the nervous system. In many severe acute functional diseases all that is found is some change suggestive of a poison in the blood, and the same applies with more force to chronic functional diseases which have long intervals of complete cessation of symptoms. There is no doubt that decompositions are constantly occurring in our digestive laboratory, and are accompanied by the formation of definite and virulent poisons; Bouchard calculates that the amount of alkaloid formed in the intestine of a healthy man in twenty-four hours would be sufficient to kill him if all were absorbed and excretion stopped. The same author shows "that if the day be divided into three periods of eight hours each, the proportional quantities of poison excreted are—Asleep, 3; early awakening period, 7; late waking period, 5." These facts may afford some clue to the nocturnal character of some cases of epilepsy and to the attacks of gout and asthma, which often occur during the later hours of the night. The nervous system, in fact, would be liable to serious functional derangements if the active functional poisons formed during the processes of life were not freely

eliminated or actively destroyed. Against this liability to self-poisoning we are protected in great part by the liver and the natural digestive secretions of the alimentary canal. When the functions of these organs are imperfectly carried out, we get various morbid states of the blood, such as anæmia and chlorosis. Sir Andrew Clark, as is well known, ascribes the blood-change in the latter disease to retained faecal accumulations.

Dr. Thomson believes that hysteria is due to perverted and disordered intestinal digestion, and finds good results from repeated purgation and the administration of intestinal antiseptics. Migraine, he thinks, is due to imperfect digestion, and he is of opinion that most of our reputed remedies for this form of headache, act by virtue of their antiseptic qualities.

Now that chemistry is asserting her claims to be heard, the stomach and bowels have regained much of the importance which they held in the minds of the old physicians as centres of the processes of life and disease. The old teaching that the origin of feelings, emotions, and moral characteristics is in the bowels, is confirmed in a way by Dr. Bland Sutton, who says that "he is convinced that the spinal cord and brain of vertebrata have been evolved from what was originally a section of the alimentary canal; in other words, the central nervous system is a modified piece of bowel!"

3. *French Retrospect.*

By DR. T. W. McDOWALL.

Annales Médico-Psychologiques, 1887.

(Continued from Vol. xxxv, page 105.)

Professional Intoxication of Wine and Liqueur Tasters. By DR. DONNET.

The author is inclined to believe, from observation and information otherwise obtained, that men employed as wine and liqueur tasters are specially subject to alcoholic poisoning, although the fluids are not swallowed—at least, need not be swallowed, unless the taster chooses. They are, however, he acknowledges, constantly subject to temptation to excess, as they are not supposed to eject the wine, etc., when drinking with customers.

The cases given by Dr. Donnet do not at all satisfy us that alcoholic symptoms can be produced by simply tasting without swallowing. When he says that the tastes, habits, and education of some of these

patients forbid the possibility of the symptoms being due to intemperance, he makes a great demand on our faith.

Wine-tasting in Burgundy. By DR. E. MARANDON DE MONTYEL.

In this paper the customs of the trade are examined in detail, and the result is to prove that *tasters* do not suffer from alcoholic symptoms, but that those who swallow—and in some departments this appears to be necessary—do to a very marked extent.

It may be a new fact to many, and very interesting, to know that distillers suffer from peripheral neuritis as a result of their occupation. They are, of course, exposed to the fumes of alcohol all day, when at work, and, no doubt, considerable absorption occurs from the respiratory surface ; whether that would be sufficient to induce the symptoms is another question.

Mental Disorders in Cases of Malarial Disease. By DR. GEORGES LEMOINE and J. CHAUMIER.

As the result of reading and the observation of some cases, the authors feel justified in coming to the following conclusions :—

1. Violent delirium, without any very distinctive characters, may accompany attacks of intermittent fever in persons predisposed thereto. It has no other significance, and is not always in proportion to the intensity of the fever.

2. In the same persons, but much more rarely, convalescence may be the period of development of a quiet delirium, stupor, or mania of indefinite duration, but generally curable.

3. Persons who long previously suffered from malarial disease, and still presenting some masked indications of its presence, are liable to intermittent mental disorders, or to chronic insanity. The diagnosis of the latter can only be made by studying the antecedents of the patient.

4. It is very probable that a form of malarial pseudo-general paralysis exists.

5. In regard to treatment, it is important to seek for malarial infection in the etiology of insanity. Quinine gives good results in intermittent insanity and in the insanity of convalescence. Its action is not beneficial when the mental derangement is chronic. It is, however, important to state that in the latter case quinine calms the transient attacks of excitement, as if they were masked manifestations of the disease.

The paper is divided into three sections. The first—historical—contains the few scraps of writing which have appeared since the seventeenth century. The second treats first of the mental disorders during the febrile attack ; next, of those during convalescence from malarial fevers ; and lastly, of those in chronic malarial infection. In connection with the latter seven cases are recorded, but they present no feature of interest.

The third section is devoted to the pathology. It gives briefly what is known of the presence of micro-organisms in the blood, and of the existence of pigment in the blood and vessels ; but only vague suggestions are made as to their relations to mental disorder.

If it is desired to show that malarial fever—acute or chronic—tends to the production of insanity, this must be done by the production of statistics—not by the recording of a few cases in which the two diseases co-existed. It is obvious that malarial infection cannot be expected to protect persons from insanity, and that, as both diseases are common enough, it is inevitable that some unfortunate individuals will suffer from both.

The following paragraph surely expresses views which, if carried out in other circumstances, would enable us to prove almost anything :—

We sometimes find ourselves in the presence of lunatics in whom the most minute examination fails to reveal the cause of the mental derangement. We can only establish that they have had previously attacks of intermittent fever, which have disappeared without leaving any physical signs. In such circumstances, ought we to attribute the origin of the cerebral disorders to malarial infection? We think it may be done without fear of error when there exist, or have existed, masked symptoms, and especially when the mental derangement occurs at regular intervals, and thus becomes itself a masked symptom, comparable in every way to intermittent neuralgia.

Cases of Hereditary Insanity in Old People. By DR. EMMANUEL REGIS.

As is well known, it is chiefly in early and middle life that the curse of heredity makes itself felt ; still there are cases, and Dr. Regis records several of them, where it does not declare itself until the victim has reached old age, when all the physical and mental trials of life had been successfully overcome. Such unfortunate people almost always present symptoms of melancholia, and pass the remainder of their lives in great mental misery ; and, to make their case worse, even senile dementia refuses to supervene to diminish their sufferings.

Five cases are recorded with considerable detail ; but they do not present any feature which is not familiar to all engaged in asylum practice. It is, however, to be noticed that not only in the patients themselves, but in the parents, the type of disease was melancholia, and the time of appearance almost always advanced life. How are these facts to be explained? Dr. Regis does not advance our knowledge in the careful remarks he makes, nor could more be expected, for, talk as we like about heredity and the causation of insanity, many of our elegantly-turned sentences only serve to cloak absolute ignorance.

(To be continued)

4. *Austrian Retrospect.*

The Anatomical Conditions of the Brains of Criminals. An open letter to Mr. Havelock Ellis, by Professor BENEDIKT, Vienna.

New ideas are often opposed because they are not in sympathy with the accepted principles of science, and the scientific world rejoices in the refutation of the novel doctrine. This occurred when Giacomini refuted my book on this subject,* but I am proud of that even if my work had no merit beyond provoking his reply.

Giacomini has enriched and confirmed my studies, and elucidated misunderstandings rather than essential differences. He refuted the proposition that the confluence of fissures is not characteristic of the brains of criminals, which he had erroneously attributed to me. Some years before my book was published I found that it was impossible to utilize the current topographical schemes—such as that of Ecker. In these schemes the principal fissures were represented as isolated, while the numerous, unnamed, tertiary sulci and depressions were neglected as far as possible. But my observations soon led me to the conclusion that many of these unnamed fissures and shallow depressions may be developed and become long and deep. Thus a brain may appear to have numerous and small convolutions. Moreover, this development of tertiary fissures leads to the confluence of the principal fissures by their indirect communication. In other brains the principal fissures are lengthened independently of the secondary fissures, and are connected with neighbouring principal fissures by passing through the separating convolutions.

The first and only absolute proposition I laid down was the “necessity for establishing a type of confluent sulci.”† The scheme of Ecker I believe to be the type of a series of brains in which the principal fissures are more or less isolated, and the unnamed fissures are in a low degree of evolution. But it was evident that there is a great number of brains which are characterized by a great development of secondary fissures, and a corresponding tendency to direct or indirect confluence of all fissures. These form a second group typified by confluent fissures,‡ but not (as was supposed) characteristic of criminal anthropology. Giacomini confirmed my observations as to the existence of this typical variety. He is in harmony with my idea, not in opposition.§

* *Anatomische Studien an Verbrechergehirnen*, Wien, 1879, and New York, 1887, *Benedikt*. *Varieta della Circonvoluzione cerebrali dell' uomo*, Turin, 1882, *Giacomini*.

† *Vide* German Ed., p. 188; American Ed., p. 155.

‡ German Ed., p. 19; American Ed., p. 32.

§ “It need hardly be remarked that conditions primarily observed in the study of brains of criminals belong exclusively to them,” German Ed., p. 109; American Ed., p. 150.

The second proposition I laid down was "that the brains of criminals represented belong to the last-named, second class; and, as shown by the work, to the extreme section of this class. The characteristics of the type are the marked evolution of fissures of secondary importance, and the direct and indirect confluence of fissures of primary importance."

It has been forgotten that my work was in correction of generally accepted views of the anatomy of the brain, and not exclusively devoted to the anatomy of criminals. I therefore spoke of "Anatomical Studies on the Brains of Criminals," and not of the "Anatomy of the Criminal Brain." Moreover, it has been left unrecognized that Mr. Wladimir Betz, of Kiew, who made the photographs and drawings for the German edition, is one of the first connoisseurs of cerebral anatomy, and acted as a collaborator in thus controlling the plates and propositions of the book.

It is also necessary to note that the greatest part of the arguments used against me were borrowed from the critical reserves made by myself.* I never considered an atypical anatomical condition to be a proof of anomalous function, but only as "entitling one to suspect" that to be the case.

I insisted more clearly in a subsequent memorandum† that a brain is possessed of atypical characteristics, not only by reason of the *quantity* of convolutions, but also by reason of their *confluences*. I shall now enumerate some of these atypical confluences, which are opposed to the type of the genus *Homo Sapiens*.

One of the most important of these confluences is that of the calloso-marginal fissure with the parieto-occipital. The human type of the first-mentioned is that it runs from the anterior end of the

* German Ed., pp. 109-112; American Ed., pp. 155-159, as follows:—"For many of the descriptive details here given, such as are absent in all previous cerebral representations, we are indebted to the special attention which I have bestowed on these brain specimens." . . . "It might possibly be supposed that the type which we have deduced from these brains is exclusively a fact of comparative race anatomy, as the normal types of most of these races and clans are unknown, and, moreover, there exists no comparative race-anatomy of the brain," &c. "For this very reason it—the proposition that the criminals are to be received in an anthropological variety of their species, at least amongst cultured races—should be handled with the greatest prudence, it should not yet serve as a premise; and for the present it should not leave the hands of the expert anatomists." . . . "In matters of fact it must yet be repeatedly proven, and that from many points of view, until it can finally rank as an undoubted addition to human science." . . . "The variety of the conditions which we may expect to meet in the different races will assign to this proposition a little halting place in the history of science, and worthless as well as valuable contributions will, for a time to come, give rise to oscillations and opinions." . . . "He—the criminal with his innate qualities—has the same relation to crime as his next of kin, the epileptic, and his cousin, the insane, have to their encephalopathic conditions."

† Zur Frage der Verbrecher Gehirne, Offenes Schreiben an H. Professor Giacomini, "Wiener Med. Presse," 1883.

frontal lobe to the anterior margin of the procranial gyrus, with an incision in the outer aspect of the hemisphere immediately behind the central fissure.

Little ramifications not unfrequently enter the præcuneal gyrus and connect with præcuneal fissures. On the other hand ramifications from the parieto-occipital fissures not very uncommonly lead into the præcuneal gyrus. But a large confluence of the calloso-marginal fissure with the parieto-occipital is atypical.

Giacomini has confirmed this observation, having found it only on one brain on both sides (0·6 per cent. of his cases). That he believed the individual to have been normal, only shows that the condition is very exceptional, and that, therefore, the individual must be regarded as atypical. If the person really were normal, it would only prove that such an atypical condition is not necessarily provocative of anomalous cerebral functions. It does not prove that it is not a sign of predisposition to anomalous functions. In my small collection of criminal brains I found that atypical condition eight times, showing that it is of high importance in this connection. And I do not doubt that this abnormality will in the future be recognized as a highly compromising stigma.

A second confluence, which seems to me to have a similar value, is that of the parieto-occipital with the collateral, principally when it takes place at that part of the collateral which lies in the middle *vasal* lobe. This part of it is not usual, but represents the limbic fissure of the lower animals and its confluence with the occipital, or perhaps a relapse or residue of the transitory fissure of foetal life.

Giacomini proved this fissure to be atypical, as he only found it in the case of one individual (an epileptic) upon one side of the brain (0·3 per cent.). He attributed the epilepsy to a large morbid degeneration on the right hemisphere, but he does not state whether the fits were congenital or recent, if they presented the symptoms of unilateral lesions, or if the person belonged to a neurotic family. He has forgotten that an atypical condition, which induces an anomaly of function, also predisposes to a corresponding pathological process. But whether or not the anatomical condition caused the fits, it is an atypical case, and therefore possesses the value of a stigma.*

A third important confluence is that of the parieto-occipital with the inter-parietal, and chiefly when this confluence is more complete and runs into the temporal fissure. This also is not absolutely of decisive value, but without doubt is valuable as a stigma.

* I have now under study the skull and brain of a very interesting murderer (Schenk). He was a good-looking, fascinating, intelligent man, but unwilling to work. His livelihood was obtained by making love to old female servants, defrauding them of their money, and murdering them in various ways with the assistance of his low associates. On both sides the occipital fissures communicate with this limbic fissure of the middle *vasic* lobe, while the limbic fissure is connected with the collateral fissure of the occiput.

Giacomini found this complete confluence on one hemisphere (0.29 per cent.). It is therefore to be regarded as atypical, and the complete Simmian model.

The confluence of the occipito-parietal with the inter-parietal seems to be of no great importance; but in every case the confluence of the inter-parietal with the temporal is more important. These last do not occur in one per cent. of normal brains.*

The confluence of the central fissure with the first frontal seems to be important, and to possess the value of a stigma.

In the same manner as the confluence of fissures is representative of atypical anatomical conditions, so it is in regard to the separation of fissures. The Russian anatomist, Zernoff, first showed that many sulci of the human brain are sometimes separated and sometimes united. Thus the inter-parietal fissure may consist of one, two, or three sections.

But the confluence of some parts of the fissure may be typical of the human brain. For instance, the forked parieto-occipital fissure consists of three parts—the stem, the calcarine, and the true parieto-occipital which separates the cuneus from the præcuneus. The separation of these three parts is atypical—it can be read in a double sense. Either the superior *pli de passage* becomes superficial and the three parieto-occipital fissures become separated,† or the inferior *pli de passage* becomes superficial and the calcarine fissure is separated.‡ That these two conditions of separation of typical confluent fissures are to be considered as stigmata is surely not doubtful.

I must now return to a very interesting evolution of a fissure—in regard to its excessive and atypical confluence. I refer to the external frontal fissure, which separates the external frontal from the orbital lobe. In man this belongs to the base of the brain, but in most animals it lies partly on the outer surface. This sulcus is usually but slightly developed in man, often divided into two sections, and is connected with the first or the second frontal fissures. A third section, which represents a third (the innermost) incision of the sylvian fossa into the frontal lobe, is generally hardly marked. I have, however, observed this fissure strongly developed in certain brains of criminals, the three sections being united, and thus forming a large sulcus, which separated the internal frontal lobe from the orbital, and ran into the fissure of Sylvius. In my opinion this is the so-called præsylvian fissure of the lower animals, which Broca considered the representative of the central fissure in man.§ I have

* In Schenk's brain, on the left side, the first external *pli de passage* is not on the surface, and the second is much reduced. On both sides the central fissures are confluent with the first frontal; and on the left side the central fissure is also confluent with the retro-central, which form a true operculum.

† See case 5 (left hemisphere of a forger) in my book.

‡ See case in "Mittheilungen des Wiener Med. doct.," 1883. "Demonstration eines Verbrechergehirnes."

§ Germ. Ed., p. 128; Amer. Ed., p. 176.

proved the correctness of my opinion by sections, by the microscope, and by experiment. But Giacomini agrees with Broca, and adduces very scanty arguments to support that doctrine. Every fissure is characterized by its relation to a certain part of the brain. The central fissure in man and apes has an intimate connection with the so-called psychomotor centres. It is surrounded by characteristic elements, the great cell of Betz at its superior end and along its anterior margin. The præsylian fissure, on the contrary, lies absolutely above these cells, while another fissure which is found in the lower animals corresponds with the above-mentioned characteristics of the central fissure.* These two anatomical conditions (negative and positive) are confirmed by experiments bearing on the motor centres of the lower animals. Giacomini thinks that these fissures, situated in different cerebral organs, can be identical, and that a fissure which is well developed in the lower animals cannot be less developed in man. This last argument is fundamentally dangerous to comparative anatomy, and requires full discussion. When few fissures exist in one part of the brain of any species, then, though few, one or the other must be well developed. That is true of many frontal lobes and many species. Therefore, one which is but little developed in man (whose frontal lobe is rich in fissures) may be greatly developed in other animals; and we hold that the præsylian fissure is nearly the only one which is better developed in many of the lower animals than in man. It is frequently the case that fissures which are well developed in the lower animals are slightly developed in man. For example, the parietal lobe has four convolutions in many animals, but in man only two. That results from the fact of there only being one inter-parietal fissure, while in the lower animals there are two. But my study of the brain of the famous murderer, Schimak†, leads me to the conclusion that the parietal lobe is subdivided into four convolutions in exceptional cases. Also that the traces of this sub-division are, although scanty, generally indicated. No one will maintain that the human parietal lobe is less developed than that of the lower animals. I think that the development of the central fissure in primates saves nature the trouble of developing the parietal fissures.

The cruciate fissure is similarly interesting, as it is also well developed among the lower animals and but slightly marked in man. It is differently developed in different animals. It often forms the anterior arch of the calloso-marginal fissure, the posterior arch of which (surrounding the posterior arch of the gyrus fornicatus) represents the stem of the forked occipital fissure in man. The microscopical examination of sections shows that the cruciate fissure almost forms the anterior margin of the psycho-motor centres in the neighbourhood of the median border. A similar small fissure exists

* Germ. Ed., p. 113; Amer. Ed., p. 160.

† "Wiener Med. Jahrbücher," 1888.

in the human brain. It surrounds the anterior margin of the paracentral lobe of Betz, having its convexity towards the occiput. Sometimes it is very greatly developed, is confluent from below with the calloso-marginal fissure and reaches at its upper extremity the outer surface of the brain. In such a case there is a complete correspondence with the cruciate fissure of the lower animals.

We must conclude, therefore, that the special study of exceptional and atypical brains leads to a great result; *it is to find analogues of every fissure of the various gyrencephalic brains of the lower animals on the human cerebrum.* And this part of my studies interested me in the highest degree, but it was completely neglected by other writers.

The study of the middle basilar lobe is very difficult. The fissures are very confused in that region, and little is there seen of the limbic fissure of Broca. But a very characteristic fissure is seen on exceptional brains of criminals. It separates the gyrus Hippocampi from the temporal lobe, and in such cases this fissure often reaches through the so-called fissura amygdalia (Wilda) into the Sylvian fossa. This fissure represents the limbic fissure in the middle basal lobe as it was represented in the famous memorandum of Broca. When existent it is generally confluent with the collateral fissure, and sometimes with the stem of the forked occipital fissure. These conditions will certainly be elucidated by the work of Cunyngham, of Dublin. In this region also there is a typical fissure of lower animals to be found in exceptional human brains.

In the early days of cerebral anatomy there were non-scientific reasons for erecting isolatory barriers between man and the lower animals. My studies convince me that these barriers exist only because of theological timidity. In consequence of my finding one of these barriers disappear I attributed great importance to the discovery of the types of four convolutions in the human frontal lobe. It had formerly been accepted as a true differentiation between primates and the lower animals that the former possessed three and the latter four convolutions of the frontal lobes. This barrier disappeared on investigation, not only in reference to the frontal, but also to the parietal lobe as before stated.

I had never affirmed that this type, which had already been described by Rolando, was characteristic of criminals and of serious atypical value. It is the result of evolution of subordinate fissures, and may appear not only in consequence of scission of the first, as I believed, but also by scission of the second or the third frontal gyrus, as Giacomini showed.

To sum up the results of my investigations. The human brain is represented by two types. (a) The first is characterized by a slight degree of evolution of fissures of the lower order, and by rare confluence of principal fissures. The corner stone of this type is represented by Ecker. (b) The second is characterized partly by a great development of principal and subordinate fissures, and partly by a great development of fissures of the lower order, and partly by direct

elongation of all fissures. Thus a more or less complete confluence of all fissures results. The extreme of this type has the value of a stigma. Certain of these confluences are to be considered atypical, and therefore as stigmata. Similarly we must consider certain interruptions of fissures as stigmata. It must be noted also that there are brains of the old-school type which are pathological because of the insufficient development of the principal fissures.

The study of the brains of notorious and professional criminals proves that a great proportion present these stigmata:—(1) By excess of evolution of the fissures; (2) by excessive confluence of the fissures in general; (3) and principally in consequence of the existence of highly atypical confluences; (4) and by atypical separations of fissures. It is also a sign of inferiority, a stigma, when the cerebrum does not cover the cerebellum on removal from the skull. But these stigmata do not represent anything more than inferiority and an atypical condition. They are found not only on the brains of criminals, but also on the brains of epileptics and the insane.

Finally, the study of such exceptional cases has already furnished a clue to the comparative anatomy of the brain, and will in the future unite its scattered facts.

NOTE.—Ueber die nähere Wechselwirkung des Leibes und der Seele mit Anthropologie: Untersuchungen ueber den Moerder Adolf Moll, Bonn, 1825 (Verlag T. Habicht). This highly interesting book by Dr. Josef Ennemoser, Professor of Medicine, and his colleagues the Anatomists Mayer and Weber, sets forth all the stigmata studied by the new school. The physiological part of the book is full of nonsense, Ennemoser being a panpsychist. He localizes the sentiments of pleasure in the organs of the chest; those of disgust in the organs of the abdomen; volition in the bones and the muscles. But, notwithstanding his theological convictions, Ennemoser has set forth with great success the anatomical, social and psychological features of crime, and has noted the "multiplicity and narrowness of the convolutions" in the case described by him.—A. R. U.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The forty-ninth Annual Meeting of the Medico-Psychological Association of Great Britain and Ireland was held on Thursday, July 24th, in the Royal Asylum, Gartnavel, Glasgow. At the opening of the meeting the chair was occupied by Dr. Hayes Newington, the retiring President, and among those present were:—Dr. Beach, Dr. Baker, Dr. Beattie-Smith (Ararat), Dr. Buchan, Dr. Barrett, Dr. Bower, Dr. Clapham, Dr. Clouston, Dr. Campbell Clark, Dr. Bonville B. Fox, Dr. Gemmell, Dr. W. W. Ireland, Dr. Johnstone, Dr. Walter S. Kay, Dr. Keay, Dr. J. G. McDowall, Dr. Donald Mackintosh, Dr. Macpherson, Dr. Macleod, Dr. R. B. Mitchell, Dr. Newington, Dr. W. R. Nicholson, Dr. Oswald, Dr. Paul, Dr. Reid, Dr. Rorie, Dr. Rutherford, Dr. Hack Tuke, Dr. A. R. Turnbull, Dr. Urquhart, Dr. W. R. Watson, Dr. Whitcombe, and Dr. Yellowlees. Drs. Collum and Bremner were also present as guests.

Drs. Ball, Motet, Morel, and Benedikt, wrote expressing their regret to be unable to accept the invitation sent to them to attend the meeting. Dr. Benedikt sent to the President a Latin telegram to the same effect, which was read at the dinner.

APPOINTMENT OF PRESIDENT.

The retiring PRESIDENT said—I have a twofold duty to discharge. The first part of that duty is to renew my thanks to you for the great honour you did me in placing me in this high position, and to express my hope that this meeting will receive the new President with the same encouragement and kindness that has been shown to me. The last part of my duty is to call on my successor, Dr. Yellowlees, to take the chair (applause). To introduce him to you would be unnecessary, as Macgregor is on his native heath; and to describe his qualifications for filling this chair would be highly impertinent on my part. Therefore I vacate it and call on Dr. Yellowlees to take it (applause).

Dr. YELLOWLEES having taken the chair, said—I thank you most earnestly for the very great honour you have done me in placing me in this chair. I can only say I hope I may be enabled so to discharge the duties of the position as not to disappoint you. Our thanks to Dr. Newington will wait till we have an opportunity of expressing them more emphatically and pleasantly than we could do here (applause). This is a business meeting, and we shall proceed at once to business; and the first and most important part of our business is the election of office-bearers. The only change in the list issued has been caused by the resignation of Dr. Greenlees, who on leaving the country has resigned office; and the Council at its meeting this morning decided to recommend in place of him Dr. Campbell Clark. With that alteration the paper as it came from the Council with their nominations is before you.

The vote was then taken; Dr. Macleod, Beverley, and Dr. Clouston, Edinburgh, were appointed scrutineers.

EXAMINERS.

The PRESIDENT—The Council have decided that one of the Examiners, Dr. Rayner, shall continue for another year, and that the other Examiner, as representing England, shall be Dr. Whitcombe. It is desirable that one Examiner shall continue for another year, so that the Council will only appoint one new Examiner each year and the older one will keep on and instruct the new Examiner in his duties. The Council felt, and I think this meeting will feel, that it is important to keep the provinces in touch with the Examiners. In Scotland the new Examiners have been appointed by the Council on the same principle as before as to teachers and non-teachers; they are Dr. Reid, Aberdeen, and Dr. Urquhart, Secretary for Scotland, who has had an infinity of trouble in connection with these examinations (applause). In Ireland it is not proposed to make any change in the Examiners, for during last year they had no work to do. There is one point which it is desirable to bring before you. It has been under the consideration of the Council this morning, and the resolution arrived at seems one for which your approval is desirable. It is that recognized teachers who present students for examination for certificates of the Association may act as assessors in the matter of these examinations as to the students taught by them. It seems important to give each teacher the right of seeing the method in which his own students are examined, not that these assessors should have any voice in the examination, but that the teacher should, if he desire, be present to see the papers, and that everything is perfectly fair to his students. I think that will commend itself to the meeting as it did to the Council (applause). May I take it that that is approved of by the Association? (applause). And being so, it will be adopted in future. I have great pleasure in reporting that our certificate is growingly appreciated. During the past year there have been granted certificates to 14 English students and 31 Scottish students. I announce the last

number with considerable pride (applause). The next item in the programme of our business is the balance-sheet of the Treasurer, for which we look to our honoured friend, Dr. Paul.

THE BALANCE-SHEET.

Dr. PAUL submitted the annual sheet (see p. 576), and said that special recognition was due to Scotland by the Association generally, and especially as to the large amount of examining fees. The balance of £409 3s. 2d. in the Treasurer's hands was the largest balance they had had for many years (applause).

The PRESIDENT—That is a most satisfactory balance-sheet. I have to ask Dr. Hack Tuke to move the adoption of it.

Dr. TUKE—I do that with pleasure. I suppose that Dr. Paul might have said not only that the balance is the largest for many years, but that it is the largest we have ever had. This is very satisfactory. I should like to explain, with regard to the Journal account, that our volume commenced this year with January, the pagination having been altered from the 1st April to the 1st January, in accordance with the decision of the Council last year. The account now submitted represents our financial position for nine months only, and as the nine months' receipts from the sale of the Journal appear on the credit side, we had to make up the balance-sheet for the same period in regard to the expenditure. Therefore the sum of £206, the expense of printing, engraving, publishing, and advertising, is of course only for nine months. If we were to take the receipts, which in due course we shall receive for four numbers of the year, and the expenses for this period, it would show an increase of expenditure of about £60, and therefore that sum should be deducted from our balance of £409. However, it will right itself this year. I think, on all points, the balance-sheet is most satisfactory, and especially in regard to the fees from the candidates for the proficiency in psychological medicine.

Dr. MACLEOD—I second the resolution. The balance-sheet is most encouraging, and we owe many thanks to Dr. Paul for his management of the funds.

Dr. CLOUSTON—May I ask what is the state of our capital fund? I think we would be rather anxious to know the capital investments.

Dr. PAUL—We have had £300 of our own invested in Consols for many years.

Dr. TUKE—Perhaps Dr. Clouston is rather suggesting that a further sum be invested in Consols, but I would say that it is most desirable that our Treasurer should have a larger sum on hand than he has had hitherto. There are various sums paid out which do not appear in the balance-sheet, and after considering it with the Treasurer I do not think the time has come when we should look to the investment of more money.

Dr. FOX suggested that £100 might be placed on deposit receipt so as to secure higher interest and still be available if required.

Dr. PAUL said that might be done.

The balance-sheet was then adopted.

The Scrutineers reported the unanimous election of the members named in the list as follows:—

<i>President</i>	D. YELLOWLEES, LL.D., M.D., F.F.P.S.G.
<i>President-Elect</i>	E. B. WHITCOMBE, M.R.C.S.
<i>Ex-President</i>	H. F. HAYES NEWINGTON, M.R.C.P.
<i>Treasurer</i>	JOHN H. PAUL, M.D.
<i>Editors of Journal.</i>	{ D. HACK TUKE, M.D. GEORGE H. SAVAGE, M.D.
<i>Auditors</i>	{ ERNEST WHITE, M.B. T. OUTTERSON WOOD, M.D.

Honorary Secretaries . { CONOLLY NORMAN, F.R.C.S.(I.), for Ireland.
A. R. URQUHART, M.D., for Scotland.
FLETCHER BEACH, M.B., General Secretary.

Members of the Council.

W. W. IRELAND, M.D.
T. S. CLOUSTON, M.D., F.R.C.P.
S. A. K. STRAHAN, M.D.
E. M. COOKE, M.B.
A. CAMPBELL CLARK, M.D.
M. D. MACLEOD, M.B.
J. WIGLESWORTH, M.D.
S. H. AGAR, L.K.Q.C.P.
R. BAKER, M.D.

J. B. SPENCE, M.D.
W. R. NICHOLSON, M.R.C.S.
D. NICOLSON, M.D.
J. EUSTACE, M.D.
J. G. McDOWALL, M.B.
H. GARDINER HILL, M.R.C.S.
B. B. FOX, M.D.
J. E. M. FINCH, M.D.
C. HETHERINGTON, M.B.

The PRESIDENT—I have now the pleasure of asking Dr. Whitcombe, as President-elect, what he has to say about the place of our next meeting?

Dr. WHITCOMBE—I would first thank the meeting generally for the honour they have done me. I feel my time for speaking has not yet come. As regards the Annual Meeting, I should be very pleased indeed to see the members of our Association at Birmingham in twelve months time. I should like to see them in very much larger numbers than I see them to-day (applause). We are in a central situation, and I think there is a feeling among a large number of members that they would like the meeting to be in Birmingham.

Dr. NEWINGTON—I propose that the next annual meeting be held in Birmingham in accordance with Dr. Whitcombe's suggestion.

This was seconded by Dr. HACK TUKE, and unanimously approved.

The PRESIDENT—I understand this is agreed to. I heartily approve the principle, though I feel the Association has sacrificed something by coming here in its kindness to me. The matter is settled that we meet next year at Birmingham under the presidency of Dr. Whitcombe (applause).

REPORT ON NURSING.

The PRESIDENT—The next matter is one which has been brought before you in such admirable form by Dr. Newington in the report of the Nursing Committee, that I will simply ask him to present that report, fortified as it is by the support of the Council.

Dr. NEWINGTON—I beg to submit the report of the Nursing Committee, and to move that the meeting adopt it. (See Occasional Notes of the Quarter.) It may appear that the report is a little prolix on some points, and probably it is, but the reason the Committee have made it so is that it is necessary that every one of the many objections that were raised at the various meetings should be set forth. Otherwise, if there had been a simple bare report, members of the Association might imagine that many of the points were not fully discussed and taken notice of. But I think the Committee can say the subject was argued from every point of view. People of very divergent views met together and gradually harmonized their views, and again I think the Committee can say every point has been taken into consideration and set forth here. I beg to propose the reception and adoption of this report, and that it be remitted to the Council to deal with and carry into practical effect as speedily as possible.

Dr. HACK TUKE—I second this motion with very great pleasure, because I look on this movement as almost the most important one that has come under the notice of this Association. I think it is a movement in the right direction, and will be of very great use indeed to the insane in future in Britain. I think that the special use of the action now taken will be quite apart from what I consider a minor point—the certificate or any prizes that may be given by Committees of asylums. The real use, I believe, will arise from these probationers being for some two years in asylums and obtaining that knowledge which will be of use to those whom they nurse and to themselves. In connection with this, I have

been extremely struck with the success which has been obtained in the United States at the McLean Asylum, in Boston, by Dr. Cowles, of whose work one cannot speak in terms of too high admiration. When Dr. Baker and I visited that institution in 1884, Dr. Cowles* was just entering on this movement, and was sanguine of its success, and it has been exceedingly interesting to me to read the various reports issued since. The last report, which came to me only a few days ago from Dr. Cowles, is a most important one, and is a valuable corroboration of the wisdom of the action taken by this Association. The results given in this report are of great interest as to the large number that have "graduated." I think there is another point in connection with this movement which ought to be emphasized, and to which Dr. Cowles refers when he says: "On the side of the physician the advantage of the new order of things might be stated strongly. To have nurses in every ward who can make an intelligent analysis of mental symptoms, and detect many of the important particulars in which disorder exists, is not only to have instruments in one's hands for the precise application of remedial influences of 'moral treatment' of a kind before unavailable, but it enlarges the physician's own knowledge of morbid conditions. The asylum thus becomes a hospital in truth, and both the humane and the scientific spirit are invited to dwell and flourish in it." I cordially second the adoption of this report.

Dr. CAMPBELL CLARK—Without taking up your time I should like to say one word on the work of this Nursing Committee, and should like to endorse very emphatically what has been said of the work Dr. Newington has done for us in this Committee. He has so shaped the scheme as to make it very easy for us to go into all the details. Otherwise I don't think we ever could have had a Committee that could have come unanimously to resolutions on so many points as this Committee has done. A great deal of that is due to what Dr. Newington has done for us. I do not think the report goes too far. I think it will meet all shades of opinion in the Association, and I am very confident that good results will follow (applause).

Dr. CLOUSTON—I just wish to say one word, perhaps by way of excuse for being a negligent member of this Committee. I would say that this movement is a very good sequence, and fits in remarkably well with the movement which now has been very general all over the country, and perhaps especially in the far north, namely, the movement to provide fully-recognized hospital wards or blocks in connection with asylums—not only infirmaries for the treatment of the very feeble, but hospital wards for the treatment of the more recent cases of acute melancholia, mania, pregnancy, puerperal and lactational cases; and I think the two movements will go admirably hand-in-hand, and be of real service in their outcome to the insane of the country.

The PRESIDENT—I have much pleasure in putting for your acceptance this motion (applause). I heartily and strongly endorse all that has been said about Dr. Newington's admirable tact and management and boundless industry in getting up this report, for it represents an amount of correspondence that no one who was not in the circle and getting letters from him can understand. At Manchester the Committee sat for three and a half hours. We met with diverse opinions, and owing, as Dr. Clark has said, to the excellent tact of Dr. Newington, we came to a unanimous finding, not once having taken a vote (applause). I have much pleasure in putting this motion to you. I think it bodes well for the nursing of our patients that we adopt this to-day. Is it your pleasure to adopt this as the resolution of the meeting? Agreed.

Dr. NEWINGTON—I take this opportunity of thanking the gentlemen who have spoken so very kindly about any little work I have done. It has been a work, I was going to say, of love, but hardly that; but it has been a work of great interest, and I have been enabled to go into it heartily on account of the

* An album containing a number of groups of male and female nurses, presented by Dr. Cowles, was shown to the members.

interest it presents. I beg to move that the report be remitted to the Council to deal with, and carry into practical effect as speedily as possible.

ADMISSION OF MEMBER.

An application for admission to the Association was submitted for Dr. Oswald, Gartnavel, and he was unanimously admitted.

PARLIAMENTARY COMMITTEE.

The PRESIDENT—In the minute of the Council it is resolved that the Parliamentary Committee should be re-appointed. The work of this Committee varies; sometimes there is a good deal, and at other times it is less. But it is desirable to keep the same men on the Committee, as they are *au courant* with all that goes on; and, with your approval, we propose the re-appointment of the Committee as they stand.

This was agreed to.

VOTES OF THANKS.

Dr. BAKER—I beg to propose that a hearty vote of thanks be given by this Association to Dr. Newington for his services in the chair during the past year. I am sure the words uttered a few minutes ago convey the feelings of the Association towards him. All who know the hard work he has done in the Nursing and Parliamentary Committees feel we are deeply indebted to him; and I do not wish to say one word more than that everyone cordially unites in the expression of our gratitude to Dr. Newington (applause).

Dr. WHITCOMBE—I second the motion, and in doing so I have to say I feel personally very greatly indebted to our late President for the very admirable manner in which he has carried through the work of the Nursing Committee. That alone has been the work of a year's presidency, and hard work too. As one of the movers in the question of nursing in asylums, I feel personally under great obligation to Dr. Newington for the immense amount of work which I know he has done. But, besides that, I feel he has occupied the chair in an excellent manner. He has brought with him an immense amount of tact and ability, which I, as President-elect, tremble to think about. I have very great pleasure in seconding the resolution.

The PRESIDENT—That is a motion which does not need to be put to you (applause). Dr. Newington, you will accept this formal expression of the thanks of the Association.

Dr. NEWINGTON—This expression of thanks has come upon me quite unexpectedly, as I did not know it was part of the programme. I thought the honour of being President was taken to be sufficient reward for any endeavours I made. I must thank you all for what has been said, and especially the gentlemen who said it. It has been my wish, and I hope in it I have been successful, if I did not do anything grand, still to keep up the traditions that have been handed down to me in the chair. I beg to thank you.

The PRESIDENT—There is another vote of thanks, so comprehensive that it requires the eloquence of Dr. Fox to do it anything like justice.

Dr. FOX—I did not think that on my first introduction to Gartnavel you, Mr. President, would treat me so unkindly (laughter) in almost the first words I should hear from you, because compliment or satire on such an occasion is far from you, and your words put me in an unfortunate position. We all know what we feel towards our officers. It is not for me to say all of us are able to express those feelings, and I for one feel certainly incapable of expressing the feelings of you all. I am sure their work speaks for itself. The editorial work is appreciated not only by our own Association, but all kindred Societies (applause), and I think the "Journal of Mental Science" keeps well abreast of the times, and is in the forefront of any Journal on that subject. That this needs not only learning, but discrimination and tact, goes without saying, and I am sure that with such judgment and knowledge, literary and scientific, as we

have in Dr. Hack Tuke and Dr. Savage, we may rest contented that our Journal will continue to be a work of which we may well be proud. The state of the finances speaks for itself. We are in a happy position, a position shared by few Associations, of having more funds than we know what to do with. Long may we continue in that position, and possibly the time may come when we will be able to devote some of those funds to some object. I will not suggest as a possibility that we might devote these funds as some branches of the still larger Associations usually do, towards payment for the refreshment of our members, but still the time will no doubt come when we will have to face the question of what we are to do with our large surplus; and, speaking for myself, I am sure I am speaking the unanimous feeling of our Association when I say that we hope Dr. Paul will be long spared to so skilfully manage our finances (applause). The work of our Secretary, like that of many other officials, does not diminish, and by the motion you have passed to-day you will give a very considerable increase to the work he has, for you have assigned to him the consideration of keeping a register of all those attendants who pass this examination, and to him will, in the first place, probably come the reports or complaints against attendants who have failed to discharge their duty properly, while the responsibility of bringing these before the Council will also rest on him. So that in addition to the work he has had in the past, we are to saddle him with more. The manner in which he has done it in the past will be the best ground of hope for the future, but it should make us the more ready to thank him for his services, and to express the hope that he will not find the work too much in years to come, for to a busy man the clerical duties imposed on the Secretary are by no means of a light nature (applause).

Dr. CAMPBELL CLARK seconded the motion.

The PRESIDENT—You know now whether it was compliment or satire when I said Dr. Fox's eloquence would be equal to the occasion (applause). I have great pleasure in putting this motion to you, for I know well how the thanks are deserved, and that the English and Irish Secretaries are included in these thanks. It is your will to accept this motion, is it not? (applause). I have great pleasure in expressing the thanks of the Association to you, gentlemen, and I ask Dr. Beach to acknowledge them.

Dr. BEACH—I have much pleasure in acknowledging this resolution. I am quite sure that with Dr. Hack Tuke as editor, aided by Dr. Savage, the Journal will stand second to none among medical journals. I know that Dr. Tuke regards the Journal as a favourite child, and bestows upon it all that kindness, care, and discrimination which he would bestow upon that favourite were it a body of flesh instead of one of paper. As to Dr. Paul, who has been Treasurer for 27 or 28 years, I know his interests are bound up in the Association, and long may they continue so. Now and then he says he must retire, but as long as he is willing to give us his services the Association will not permit him to retire. He is held in high estimation by all of us, and our financial position is being improved owing to the great interest he takes in it. Our Secretaries are inspired with the hope of making this Association second to none in the world. We shall do all in our power to realize that. Speaking for myself personally, I could not have done my duty without the assistance of, among others, Dr. Tuke, Dr. Savage, and the ex-President, Dr. Newington.

THE PRIZES.

The PRESIDENT—My next duty is a pleasant one—that of announcing the winners of the Association prizes. First, the Gaskell prize—that important prize of which the Association disposes—has been awarded, I am glad to tell you, to Dr. G. M. Robertson, Assistant-Physician in the Edinburgh Royal Asylum. That is throughout Scotland a great satisfaction. About the other prize, the bronze medal and ten guineas, I have something quite special to say this year. Two of the papers are so good—so exceptionally good alike in the direction of the work, in the quality of the work, in the amount of work

contained in them that the adjudicators have felt bound to bracket them alike, and further to recommend to you earnestly that you should recognize both these papers, and recognize them equally by giving this year a double prize. We deem it of very great importance to encourage in our assistant medical officers high-class scientific work such as these two papers contain, and when you see them in print you will be simply amazed at the amount of real scientific labour contained in them both. I was perfectly surprised that a resident medical officer could find time to do it amid the numerous different non-scientific duties laid on him, and it is the opinion of the adjudicators and of your Council—for it was brought before them this morning—that the two gentlemen, who are found to be the writers of these papers, and whose names only came before us this morning, should both receive a bronze medal and both the ten guineas. Our funds are quite able to bear this. If no essay had been forthcoming equal to the prize we would have given none, and when two have come both fully deserving the prize, we hope you will give effect to the recommendation of the Council and give them each a prize (applause). The names of the winners I have great pleasure in announcing, and I announce them alphabetically of course. The name of the first is Dr. Mackenzie, the Assistant Medical Officer at Northumberland County Asylum, Morpeth, who has written a very remarkable paper; and the other gentleman is Dr. Johnstone Smythe, formerly at Brentwood and now at Barming Heath, who has also written a paper of great merit. I propose that we should give to each of those gentlemen the full value of the prize. We are able to give the full prizes, and I think it important for this Society to encourage and recognize scientific work, for we are told on high authority that Asylum medical officers never do scientific work at all (applause).

Dr. NEWINGTON—I beg to second that resolution, and I can endorse every word the Chairman has said. I had an opportunity of reading the papers first, and I may say it took me a considerable time to read and re-read them so as to master as far as I could the excellent and extensive work that is contained in them.

The motion was unanimously agreed to.

THE BERLIN CONGRESS.

The PRESIDENT—The next matter is the appointment of representatives to the Berlin Congress. It is very desirable that our Society should be represented there by any of the members. I understand Dr. Hack Tuke, Dr. Beach, Dr. Campbell Clark, and Dr. Rutherford intend to be present, and I propose that they and any other members who may be going to Berlin should be accredited by us as representatives and should receive all the *kudos* that that implies.

Agreed.

This terminated the business meeting.

THE LUNCHEON.

The members afterwards partook of luncheon, Dr. Yellowlees presiding.

The CHAIRMAN, rising after luncheon, said—A very unexpected duty has fallen to me, and it is, unlike some duties, an unexpected pleasure as well. We have here to-day, I think, the oldest member of the Medico-Psychological Association—at least, he is such an old member that the date of his entry is lost in the mists of antiquity, and nobody knows when he joined (laughter). Antiquity, however, is not my special reason for proposing the health of Dr. Donald Mackintosh (applause). My reason, as you already know I daresay when I have mentioned his name, is that we all wish to do honour to him for the very conspicuous generosity he has shown in the encouragement of mental medicine (applause). It is known to you all that Dr. Donald Mackintosh has presented to the University of Glasgow the sum of £1,000 for that purpose, and has presented another sum of £1,000 to St. Mungo's College, Glasgow, for a like purpose (applause). In the University the interest of this fund is to establish

the Mackintosh Bursary of Mental Medicine, and in St. Mungo's the interest is to establish a lectureship in Mental Medicine (applause). These two things are of very special interest to this Association, and I think I should be doing wrong to the Association as well as to my own feelings, if I did not ask you now to drink earnestly to the health of Dr. Donald Mackintosh, and tell him how we honour liberality like that. There is another and special reason why it is peculiarly appropriate that this should be done here, and that is that his generosity has an element in it which we must all honour highly, and which to me and all of us sitting in this room is of special interest. These gifts were given specially in commemoration of the honoured name of my predecessor here, Dr. Alexander Mackintosh, who for so many years filled so worthily the post which I now hold. It is to me an especial pleasure to have an opportunity of saying here, within those walls once so familiar to him, how highly we, I, all of us who knew him, honoured Dr. Mackintosh; how highly we esteemed the genuine integrity of the man, his thorough devotion to his work, and the great things he did in encouraging the employment of the insane in days when their occupation was little understood or valued. It is peculiarly appropriate that a gift given in memory of him should be here recognized and honoured, and I feel glad exceedingly that it is given to me to say these words, for I know I am speaking your feelings as well as my own when I say them (applause). I ask you for both these reasons—our special interest in mental science, which Dr. Mackintosh has done so much to foster and given an example which I wish were largely followed, and also for the special and peculiar reason that we are met here in a room that used to be so familiar to my honoured predecessor—for these two reasons I ask you to drink to the health of Dr. Donald Mackintosh. (The toast was drunk with much cordiality.)

Dr. DONALD MACKINTOSH, in replying, said—I assure you I feel overwhelmed, not only for the compliments to myself, but for the encomiums you, sir, have passed on my late brother. I, of course, have many pleasant remembrances in connection with Gartnavel, which was a place where I used to resort when my brother was here in charge, now succeeded by our excellent and accomplished President, Dr. Yellowlees. It is to me, however, more than complimentary to speak in the manner you have done in respect of what I have done for psychological medicine. I have certainly been connected with the institution since it was founded, and ever since I have had the pleasure on frequent occasions of meeting the members of the Medico-Psychological Association. Of late years I have not, I confess, been able to do so to the same extent as formerly, but I have always a lively pleasure in meeting members with whom I had pleasant associations on former occasions. At present, I am sorry to say there are a great many of those now absent from this meeting whom I had the pleasure of meeting frequently on former occasions. I thank you very much for the compliment you have paid me. It is quite undeserved on my part; at the same time, I feel it very highly and beg you will allow me to say you have not only my good wishes as chairman of the Medico-Psychological Association, but my hope that it may long flourish and be presided over by a man so distinguished as Dr. Yellowlees (applause).

The CHAIRMAN—Dr. Mackintosh was so prompt that Dr. Campbell Clark had not an opportunity of saying a word on behalf of St. Mungo's College. Dr. Clark, I know you would like to say something.

Dr. CAMPBELL CLARK—I am exceedingly pleased you have given me this opportunity of speaking on behalf of St. Mungo's. I would have been glad if I had had time before Dr. Mackintosh replied, and I might have spoken at more length in reference to his generosity in endowing a lectureship in St. Mungo's. Of course, to me, personally, it is a great consideration, for it enables me to do more for the students than I otherwise could; but, apart altogether from personal considerations, I think it was a very graceful honour which Dr. Mackintosh paid to the College, and, further, apart from all local associations, I think

he paid a high honour to this Association, for it recognizes psychological medicine as a subject that ought to be endowed in any college or university, and by his generosity he recognized the importance of the study of mental medicine, which this Association cultivates. I have great pleasure in meeting Dr. Donald Mackintosh and joining in the vote of thanks (applause).

THE PRESIDENTIAL ADDRESS.

After a short interval the Association met again for the purpose of hearing the address by the President. (See Original Articles, p. 473).

Dr. NEWINGTON—I have much pleasure in proposing a vote of thanks to Dr. Yellowlees for his very able and instructive paper. Last year I had a little to say on the same subject, and very much on the same lines as he has gone on, and with the very same views as to the absurdities that are being brought forward by members of our profession, both in this branch and outside of this branch. The question of hospitals for the insane has, undoubtedly, been a very pressing one for many years. Dr. Yellowlees mentioned 1881, I think, as the date of his own contribution on the subject, but the thing was shadowed out as long ago as 1845 by the Act of Parliament which was then passed. There is such a very obvious answer to all this outcry about the introduction of treatment of insanity by general physicians. It is this: What are our patients, what are the patients that are in our asylums now except the results of failure of medical treatment by the general body of the profession? I have used the argument before, but I may say this—that there would have been no asylum superintendents now if the general body of the profession could have, and had, undertaken successfully the responsibilities which it now wants to take upon itself. And I may also point out another thing that was mentioned in the London County Council report. One of the witnesses said that he saw many cases of general paralysis, and that there were as many cases of general paralysis outside as inside of asylums, and that they were seen in their initial stages; and I should like to know where and what have been the results of treatment of general paralysis by members of the general profession who had seen them in the first instance, whether any of these have recovered, and what guidance have we received from the general body of the profession who have these extreme advantages in observing general paralysis in its beginning? (applause). Saying that, I propose a hearty vote of thanks to Dr. Yellowlees for his very able paper (applause).

The PRESIDENT—I thank you very much for the kind and patient way in which you listened to me. To tell the truth, if I had known the County Council were to be wise enough to throw out the report, I would have taken another subject, but not until my paper was in the hands of the printer did I know that, and then I had not the time, nor, I confess, the inclination, to take a new subject. But the report seemed so interesting in its errors, and much of the evidence given so feeble, that it became us, as a profession, to take cognizance of it fully and critically. I thank you for having listened to me so carefully and kindly (applause).

Dr. Fox—I do not understand whether we are to discuss the paper—whether it is in order to make remarks.

The PRESIDENT—Surely.

Dr. Fox—Well, in that case, at the risk of being thought self-assertive, there is one point on which I should be glad to give the meeting my experience within the last year, because I think it is an important point that presses on the attention of all of us, and it behoves us all to recognize it. Dr. Newington last year laid a good deal of emphasis on having in every county two district asylums, one for curable and one for chronic cases; and, with your permission, I will tell you what happened in our County of Somerset since we met last year. For the last few years the asylum at Wells has become congested; only a few *wards* were left for males and females, and it fell to the County Council to pro-

vide means for meeting that congestion, and they appointed a Committee, consisting of members of the Asylum Committee and of the County Council, and certain individuals whom they invited, and they were complimentary enough to include me in the number, to meet and advise some means by which such congestion might be relieved; and remembering Dr. Newington's remarks, I suggested very strongly, from a scientific and economic point of view, carrying out the designs which he pointed out to us last year. I was met by two strong arguments—arguments proceeding not solely from the laity in the Committee, but—and I say it as freely in his absence as I would in his presence—from the Superintendent of the County Asylum of Wells himself. The amendments made on the report as to what is considered a large, popular, and scientific method of treating insanity in England and Scotland as a whole, were, first of all, that the office of superintendent at a chronic asylum would be of the nature to drive a sane man insane before long—there would be a sameness of occupation, a want of hope, and an absence of object, which would be most discouraging. That was the first objection. The second was this—partly a financial objection—that you must fill up your acute—you must to a certain extent draft off chronic cases to the acute to do a good deal of the household work, or else introduce into your recent asylum, your acute asylum, an amount of sane workmen and workwomen that would add very much to the cost of treating each case there. These were the two objections urged against me. I should not have ventured to have addressed you on this subject except that I think it is quite possible that there may have been no other county where, during the last year, in which this subject has been mooted, there has been a similar end to the discussion. It is for that reason, and because I think the subject a very practical and a very pressing one, that I ventured to tell you what objections were made to the scheme which Dr. Newington and you, sir, have laid before us, and because I venture to think—although it is a scheme that requires a certain amount of thinking out in detail—that we are all agreed it is a scheme that would really work well for the mental health of the community at large, and a scheme which we should grudge no pains to elaborate in detail and to press upon those who have the power of putting it in force (applause).

Dr. BOWER—The subject before us is of very great and immediate public interest, because the report of the London County Council Committee was only postponed for six months, and I think it is very wise that we should take every opportunity of giving information to the members of the general profession and to the public at large as to what we think on this subject, and I am glad to find that, in the main, your remarks agree with those I made to the South Midland Branch, of which I am president, in an address which I gave a short time ago. I think, perhaps, I went a little further than you did, and advised more frequent mutual consultation than we have, in England especially, before and after the admission of patients to asylums. The general physician ought certainly, I think, more frequently to call in the specialist and, *per contra*, the specialist might more frequently, I think, than we do in England call in the general physician. It is a general advantage, both to our patients and to the furtherance of medical science (applause). The President's details as to the proposed qualifications of the London County Council's hospital staff were most interesting, but probably owing to his official position he thought it wise not to note that what the Council Committee recommended as to the staff and situation, are suggestive of inspiration by certain witnesses who are on the staff of a certain hospital in a London square, the situation of which was by the Committee recommended for the proposed hospital, or if not by the Committee, by one of the witnesses. Dr. Newington in his remarks mentioned the calling in of the specialist in nervous diseases. Recently I had an opportunity of testing the value of the opinion of one of these, an eminent specialist. I had a patient whom I diagnosed as a general paralytic. The patient got more or less better, as general paralytic patients do, and

was taken, entirely with my consent, to live at a farm-house under proper care. While there his wife took the case to this very eminent London physician—I do not use the term with a sneer, by any means, for no one in London or elsewhere has done more in neurology—and he asserted there was absolutely nothing the matter with her husband, and that it was a scandal he should be kept on the books of an asylum, and that she ought to insist at once upon his being discharged as recovered. On that representation, as I had not seen the case for five or six weeks. I discharged the case as recovered on the wife's order, and before a month had elapsed I was asked to take the case back again, and I have since heard that it is an undoubted case of general paralysis. I did not, however, take the case back.

Dr. CLOUSTON—I did not know we were to have the privilege of discussing the President's Address, but as we have I desire to contribute three small items. The first is to recommend all members of the Association who have not yet read this report of the London County Council to make a special study of it for its remarkable psychology. I do not think I have read the works of any of our great popular novelists or studiers of human nature with greater pleasure than I have read that report. Whether you look upon it in the light of the philosophy of enthusiasm, or as a specimen of special pleading, which ever way you choose, the report is charming and delightful reading. I do not think you can go to any report which could be a better lesson on the way to get up a report to suit your wishes (laughter). There is a delicious manner in which the various distinguished witnesses are asked one after the other: "Do you not think our knowledge of mental disease is on the whole backward?" Answer: "I think so; certainly!" "Don't you think that under certain conditions we ought to have this improved?" Answer: "Yes, certainly!" These two questions are the gist of the report, and we have paraded before us the names of those very distinguished men as in favour of a special scheme, whereas if you boil down their evidence it is in favour of two points—that our knowledge in psychological study is backward, and that we ought to improve it. But in spite of this I am perhaps rather more favourable than you are towards the establishment of some sort of hospital supplementary to existing asylums in or near London. Let us get the benefit of all the brains and enthusiasm and learning of a great many who settle in the metropolis, and have exceedingly little to do during the first years of their professional lives (laughter). The second point on which I would make a remark is the gross injustice which has been done. I scarcely admit that it was possible for many of the witnesses to have been so entirely ignorant of the fact that a great literature of brain and mind, a great literature of the criminal tendencies of human nature, a great literature of the physiology and anatomy of the brain has been created within the last hundred years by men who have been students of mental disease. I may mention the names of Griesinger, Westphal, von Gudden, Krafft-Ebing, Meynert, Esquirol, Falret, Baillarger, Morel; and Prichard, Bucknill and Tuke, Maudsley and Bevan Lewis in our own country as men who have indubitably advanced our knowledge of the psychology of the brain, and who have created a great psychological literature; and the way in which the existence of such literature was obviously and wilfully suppressed in that report is, I think, a perfect scandal to the honesty of the present age of medicine. My last point is this—to make a supplementary suggestion as to what you have said in regard to what should be the state of matters as to the providing for the insane in the best way. It is this: Is it not possible to provide hospital wards, or special hospital blocks in small counties, in actual connection with our asylums, and thereby get the benefit of the special staff and individualization without the increased expense of administration and new buildings which we are now called upon to make? In fact, is it not possible in this way to solve the question we are all so anxious about in half of the eastern and southern counties, without, as it were, creating *de novo* so many

London hospitals? I quite agree with Dr. Newington as to the great value and interest of the paper we have listened to by our President (applause).

Dr. URQUHART—I thought when Dr. Clouston began to speak about the London Committee finding just what they were looking for, that he was to conclude with a motion, and I venture to suggest to-day that we should in a series of propositions exhibit the feeling of the Association in regard to this question. For some years now we have been thinking a great deal about it. The American Association have formulated their ideas in regard to hospitals for the insane, in regard to the staff, and generally in regard to the working of them, and it would be a favourable opportunity, now that we have finished with the great question of nursing, to enter on this second question—the extension of the hospital treatment of insanity in connection with our asylums.

Dr. MACLEOD—If that requires seconding I shall be most happy to second it. I think the Association should speak out now. Certainly the members of it had a poor chance of doing so in answering the cut and dried questions that were sent round by the London County Council. I think it was utterly impossible to give a fair categorical answer, or any answer, to the questions sent round, and that the Committee, or whoever were at the bottom of sending them round, framed them so as to show up the superintendents in as unfavourable a light as it was possible.

Dr. CLOUSTON—May I ask the exact terms of what is proposed?

Dr. URQUHART—I merely made the suggestion that the Association should adopt a series of resolutions.

Dr. CLOUSTON—You could not do that—adopt a series of propositions—on the spur of the moment. What I would suggest is that if you move for a Committee to frame the resolutions, as in the nursing question, probably something would come out of it.

Dr. BEACH—Dr. Bower has spoken of his scheme for hospital treatment of the insane as being postponed for six months, and Dr. Clouston has pointed to the advantages which the young and rising physicians might themselves gain from visiting these patients. But, alas, that scheme has failed. It has been definitely thrown out by the County Council. They say it is not a metropolitan scheme, but that it is a national one, and being a national scheme, the County Council of London can no longer undertake it. It has failed utterly, as it deserved to do, and till some other Council brings up this matter, there will be no such hospital for the insane in London.

Dr. FOX—Has it been thrown out absolutely?

Dr. BEACH—Yes.

Dr. FOX—How long ago?

Dr. BEACH—Within the last six months.

Dr. FOX—It was postponed for six months.

Dr. BEACH—And at the end of six months it was thrown out. I have seen it in print, and it has been thrown out definitely and entirely as being not metropolitan, but national.

Dr. URQUHART—I think that is the more reason why we ourselves should move. If it is a question of national importance, I do not see why we should not take it up on different lines; and I would move that a committee be appointed to formulate a series of propositions as to the treatment of the insane.

Dr. CLOUSTON—I think the nomination of the committee should be left to the President and the ex-President. The nomination of a committee on the spot is most difficult, and I am sure if we left it to these gentlemen a most wise selection would be made. I think we should give this committee great power as to positive as well as to negative suggestions.

Dr. WHITCOMBE—I rise to say that I hope this time next year I may be able to show you that ideal arrangement in the treatment of the insane of which you have spoken. For the last ten years we have had in Birmingham a hospital for chronic patients, and our old asylum has practically been the hospital for acute

cases. I may say that we turn over one-half of our patients in our old asylum yearly, and in addition to that I may say that the day before I left I opened my second new hospital ward—new so far as reconstruction is concerned—for the treatment of all our acute cases. For some months on either side I have had the hospital ward open. I have sent the patients to bed when they come in, and I keep them there for a week; and I must say so far as my observation has gone, I have found that of very great advantage. In the first place, the medical supervision is very much better with the patient in bed than with the patient out of bed. In the second place, I think the patient by the end of the week begins to think there is something wrong with him, and when you have once that impression you have taken the first step towards recovery.*

Dr. ROGERS—I appear here somewhat in the position of Rip Van Winkle—as one who, waking up after 25 years of an interval, finds people discussing things that have been settled long ago. The labours of previous committees have been entirely ignored. More than twenty years ago committees of the County Justices of Lancashire were formed to consider the whole of this question, including that stated by Dr. Fox—the question as to the moral effect of those having charge of chronic cases, and everything else; and the result of that was that the hospitals then existing had annexes built to them, as you are probably aware, the intention being that chronic cases should be drafted in where they might be considered incurable. The only objection I know—unless you attack the competency of the staff—was that they were on too limited a scale, being for 400 or 600 when they wanted 1,000. A great deal was laid to the bad moral effect on the patients who were transported to these annexes where they would be entirely hopeless, as if there were written over the portals, “All hope abandon ye who enter here.” But it was not found to be so. On the other hand, I have known patients who were condemned for a series of years, recover directly after they were sent to an annexe. Then about treating in bed, it was the plan long ago that every patient was put into bed and kept there as long as necessary. Of course all this was suppressed by the London County Council, because it was not their object to bring it forward.

The PRESIDENT—Do I understand the serious duty is laid on Dr. Newington and myself of nominating or appointing a committee which will prepare and submit resolutions on this important subject? (applause). I quite agree that a great deal has been done already, and that we cannot have any difficulty as to giving our aid in the solution of the matter. Is it your wish that Dr. Newington and myself should appoint the members of this committee to frame resolutions for the spring meeting? (applause). Then I hold that as carried.†

The meeting then terminated.

In the afternoon the members enjoyed a sail up the Gareloch, and in the evening the annual dinner took place in the Grand Hotel, Glasgow.

* At the meeting of the British Medical Association at Birmingham in July, several members of the Medico-Psychological Association visited the Borough Asylum, and had the opportunity of seeing the arrangements referred to by Dr. Whitcomb. They afford ample evidence that the so-called hospital treatment of the insane can be carried on in association with an ordinary asylum.—[Eds. “J.M.S.”]

† The members nominated were Drs. Clouston, Rooke Ley, T. McDowall, Needham, Hayes Newington, Rogers, Savage, Hack Tuke, Urquhart, Whitcombe, Ernest White, Yellowlees.

BRITISH MEDICAL ASSOCIATION.

BIRMINGHAM MEETING.

Section E.—PSYCHOLOGY.

President.—FREDERICK NEEDHAM, M.D.

Vice-Presidents.— { S. H. AGAR, L.R.Q.C.P.
 { E. B. WHITCOMBE, M.R.C.S.

Hon. Secretaries.— { JOSEPH WIGLESWORTH, M.D.
 { EDMUND LEWIS ROWE, L.R.C.P.

WEDNESDAY, JULY 30TH.

The attendance of members in this section was unusually large, so much so that on the second day the meeting was compelled to remove to one of the large central halls of Mason's College.

PRESIDENTIAL ADDRESS.

The PRESIDENT delivered the opening address. He reviewed the 32 years of his office as an asylum superintendent. He referred to the darker days of asylum management in the earlier part of this period, and to the legislation which had resulted from a change of front on the part of the public as to the requirements and protection of the insane, attributing the enlightenment of public opinion on this matter largely to the scientific and practical investigations of the alienist physicians themselves, and to the influence and demands of the Lunacy Commissioners. Public asylum accommodation had increased both in quantity and quality, and important additions had been made in the special wards for acute cases, and in the workshops for the employment of the insane. A similar difference was noted in private asylums, specially marked in the free admission of light everywhere, and the endeavour to beautify the homes where insane patients were received, in recognition of the fact that the behaviour of lunatics is governed in great measure by the character of their surroundings, and that they *do* rise to what is expected of them. The private asylums also had their well-appointed infirmaries, their departments for the instruction and amusement of the patients, their separate cottages and villas for the accommodation of suitable cases. Advance was not limited to improvement in the construction of buildings; it was seen also in the mode of dealing with patients, the abolition of mechanical restraint, the improved nursing arrangements, and in the scientific investigation of insanity. The evils of mechanical restraint were referred to, and the opinion expressed that there was still too much of it. Chemical restraint, as a means of securing quiet and peace, without corresponding benefit to the patient, was condemned. More efficient attendants and nurses were now supplied, and they in their turn required better accommodation and provision, both physically and mentally. The Commissioners had done much to bring these latter changes about by their suggestions made in 1858, a summary of which was quoted. More cleanly habits, increased quiet at night, better sleep, greater safety of epileptics, prevention of suicide, and a diminution of anxiety to the superintendent were some of the chief benefits of a more efficient system of nursing. The employment of educated and refined attendants was spoken of with favour, and the need of a special training institution for attendants dwelt upon. The exclusion of improper persons by a system analogous to that of the Scotch board was to be desired. The advantage of occupation and amusement for patients was seen in the improved physical and mental health, affording them

less opportunity for indulgence in morbid thought, and furnishing them with an outlet for excitement. Patients are now encouraged to mix as much as might be with the outside world; attendance at religious services, as a means of soothing the mind, and as furnishing a motive for self-control and self-respect, was so far deemed desirable that asylum chapels were no longer behind other places of worship in beauty of structure and the musical and other adjuncts of Divine worship. On the side of pathology there was distinct advance. In 1869 the proportion of post-mortems held was 32.6 %, in 1889 it had reached 75.8 % of deaths. To the West Riding Asylum belonged the honour of being the first to publish the results of systematic investigation of insanity as carried on under the able supervision of Dr. Crichton Browne. Similar careful work was being done in other asylums; to some extent in all. Pathological laboratories, for the use of skilled pathologists, were now found in many asylums. The physical origin of mental disease had become an axiom of our faith. Progress had also been made in the matter of treatment. Drugs had their proper place in the treatment of the insane, but in place of the drastic purgatives of former days, sedatives, such as sulphonal, paraldehyde, etc., had come to the fore. Mild laxatives, pancreatine, and zymine were in request, and peptonized and prepared foods were given. The shower bath had been replaced by the less terrorizing Turkish and warm baths, and enforced exercise and massage had been added to the list of our therapeutical measures. But a far more important part of treatment was the establishment of intimate personal relations between the superintendent and staff and the patient. Reference was made to the results of this improved state of matters. There was a slight decrease in the proportion of deaths; that the decrease was not greater was attributed to the larger number of chronic cases admitted, the poorer health, and the increase in the average age of those sent, and the increased proportion of cases of general paralysis and epilepsy. Where these sources of error could be to some extent eliminated, as in the statistics obtained from Barnwood House, extending over a period of 30 years, the percentage of recoveries was found to have considerably increased, and the death-rate to have fallen to little more than a third of that obtaining 25 years ago.

In the discussion to which the above address gave rise, the chief points were the improvement of the condition and status of asylum nurses and attendants, the scheme for permitting the exchange of patients from one asylum to another, and the inadvisability of erecting huge institutions for the insane. Drs. CLIFFORD ALLBUTT, URQUHART, WHITCOMBE, and YELLOWLEES spoke. All agreed that the amelioration of the nurses and attendants' position was one of pressing importance, that the tendency to go on increasing the size of existing asylums should be stopped, that smaller institutions should be built, and that among the chronic insane an interchange of patients was most desirable.

A clinical paper, entitled "Imperative ideas outside insane delusion," by Dr. Hack Tuke, went to prove that imperative ideas might haunt a person, leading to unusual actions or conduct without the person being actually insane. Cases were given, and the case of Dr. Johnson was quoted in support of this theory.

Professor GAIRDNER looked upon such persons as borderland cases, in which the imperative idea might so interfere with the manifest duties of the individual as to ultimately require him to be officially recognized as insane.

Dr. JAMES STEWART, Dr. URQUHART, and Dr. CLIFFORD ALLBUTT continued the discussion. The latter thought a distinction should be drawn between insanity which was of limited extent, but in which a morbid line of thought cut deeply, and between that which was more diffuse, and so more transient in character.

Dr. YELLOWLEES suggested that these imperative ideas might be a luxury of the well-to-do, and Dr. WIGLESWORTH that hypnotism might be beneficial in such cases.

The Proposed Hospital for the Insane in London.

The opening of a discussion upon this important subject could not have been placed in more able hands than those of the esteemed Physician Superintendent of the Royal Asylum, Gartnavel, near Glasgow. In a speech of much force and vigor, Dr. YELLOWLEES exposed the fallacies of the report recently presented to the London County Council by a sub-committee of that body. The whole tone of the report, he stated, was offensive. The idea of sending out three written questions to the Medical Superintendents of public asylums, which resulted in their answers being treated with contempt, was sufficient to prove the character of the report, and he considered it was monstrous to suppose that a small hospital, such as that recommended by the committee, containing not more than 100 beds, would be of any use for educational purposes. Dr. Yellowlees advocated the erection of "brain infirmaries" in connection with our existing asylums, and he offered the warmest thanks of the section to Dr. Clifford Allbutt for the excellent but unwelcome evidence he had given before the committee.

In the discussion which followed the report of the committee was severely criticized.

The PRESIDENT, Dr. OUTTERSON WOOD, Dr. COOKE, Dr. URQUHART, Dr. HACK TUKE, Dr. CLIFFORD ALLBUTT, Dr. WIGLESWORTH, and Dr. DOUGLAS took part in the discussion.

Sunstroke and Insanity : by Dr. Theo. B. Hyslop, of Bethlem Hospital. (See Original Articles.)

The PRESIDENT, Dr. HACK TUKE, Dr. YELLOWLEES, Dr. OUTTERSON WOOD, and Dr. AGAR discussed the paper, and Dr. HYSLOP replied. The general opinion was that this affection was exceedingly rare among the insane, that its general characters were dementia with convulsive outbursts of intelligence or irritability, and that sunstroke was very frequently given as a cause of insanity when in reality it had nothing to do with it.

Hypnotism as a Therapeutic Agent.

This subject was introduced by papers contributed by Dr. Norman Kerr and Dr. G. C. Kingsbury, and were followed by a series of experiments by Dr. Lloyd Tuckey and Dr. Kingsbury upon two gentlemen who offered themselves as subjects. These experiments, which were made openly before a crowded audience, were conducted in a manner which claimed the confidence and attention of the meeting, and the President congratulated the section upon the scientific spirit in which the demonstrations had been carried out. The gist of Dr. Norman Kerr's paper was to the effect that hypnotism was a subject which should not be investigated, and though unsparing of his condemnation of it he failed to produce any facts in support of his contention.

Dr. KINGSBURY sketched the history of hypnotism, and gave a description of the method followed by Drs. Liébault and Bernheim, of Nancy. He controverted the statements made in the lay press by certain eminent members of the profession, and condemned their action in vetoing the use of an agent they did not understand. He gave notes of a series of cases in which hypnotism had been of service, and advocated an investigation of the subject.

Dr. LLOYD TUCKEY spoke in favour of suggestion as practised by the Nancy school and quoted the views of other eminent continental men. He also stated his experience of 500 cases of his own.

Dr. HACK TUKE spoke strongly in favour of studying the phenomena of hypnotism, in which he had been interested for many years, apart from their value as a therapeutic agent, and these points should be kept distinct. He said he looked upon an individual as hopelessly dense who failed to appreciate the value of their connection with medical psychology, and he urged that the subject should be taken up and worked at in a scientific spirit by some of the younger members of the profession.

Mr. NEECH gave particulars of a case in which he had amputated a finger, having first hypnotized the patient.

Professor GAIRDNER stated he would leave the room in a different attitude towards hypnotic phenomena from that in which he entered it. He gave some interesting experiences of his own, and concluded an excellent address as follows: "It is not until to-day that I have ever felt myself in the presence of an assemblage in which the leading facts of hypnotism could be gone into with the conviction that they were honestly, faithfully, and scientifically displayed with no other object than the good of humanity."

Dr. CLIFFORD ALLBUTT said that though Dr. Kerr's paper was admirable in rhetoric and full of moral warmth, it failed to have any weight, as he had given no facts. By hypnotizing a patient you were said to exchange one morbid state for another, but even if this were true it would be equally true of vaccination or the application of a blister. There could be no objection to such a substitution if the second morbid state was more tolerable than the first. The worst of warning off scrupulous men from investigating hypnotism was that by so doing you would hand it over to knaves who would use it for base purposes.

Dr. JAMES STEWART spoke of hypnotism in connection with the cure of inebriety, and Mr. GEORGE BROWN advocated the appointment of a committee of investigation.

Dr. EDDISON said the time had long gone by when any reasonable person could discuss whether hypnotism was real or not. It was as certainly proved as it was possible to prove anything, and he thought the members of this section were especially qualified to carry out such an investigation as that proposed.

Dr. URQUHART considered there was the greatest necessity for an investigation, and together with Mr. NOBLE SMITH strongly advocated the prohibition of public performances which were brutalizing and demoralizing.

Dr. YELLOWLEES said personal influence and suggestion were matters of everyday practice, and the practitioner who did not add these potent imponderables to his prescriptions greatly failed in his duty to his patient. He thought there were two aspects of the subject to be considered: 1st, its liability to abuse, and 2nd, its potency for evil upon the brain of the patient.

Dr. WALTER SIBLEY thought the profession should warn the public against public performances, and suggested experiments upon the lower animals. He was anxious to know if the action of drugs could be suspended by hypnotism, and if the picture suggested to a hypnotized patient was objective or subjective.

Dr. W. DOUGLAS, Mr. G. W. MOULD, Mr. P. W. G. MUIR, and Dr. FRANCIS PARSONS also joined in the discussion.

Dr. NORMAN KERR, in his reply, admitted that the demonstration and discussion were in accordance with the scientific study of hypnotic phenomena, namely, observation and research in the presence of medical investigators, and he would now welcome an inquiry into the whole subject.

Dr. KINGSBURY thanked the section for the kindly reception accorded to his paper, and also for the manner in which the demonstrations by Dr. Tuckey and himself had been received. With regard to Dr. Kerr's paper and reply, he felt bound to deny Dr. Kerr's assertion that the hypnotic condition was a disordered cerebral state. For therapeutic purposes the form of sleep required to be of the slightest description, which was more of the nature of natural sleep, during which the most vivid impressions were made, and in which scenes and landscapes could be vividly seen which had no real existence. He regretted that Dr. Kerr should have termed the hypnotic condition teetotal drunkenness; and for him to say that he would prefer a man to remain a drunkard rather than be cured by hypnotism he looked upon as a statement which was positively wicked. He concluded by saying he believed the action of drugs could be controlled by hypnotism, and joined in the general condemnation of public exhibitions.

At the close of the discussion the PRESIDENT put it to the section to say if it was in favour of the appointment of a committee of investigation, and the reply being unanimously in favour, Professor GAIRDNER proposed, and Dr. EDDISON

seconded, resolutions condemning public exhibitions and in favour of the appointment of a committee, subject to the approval of the Council of the Association, to investigate the phenomena of hypnotism and its value as a therapeutic agent.

The following were nominated members of the committee:—Dr. Needham, president of the section; Professor Gairdner, Glasgow; Dr. Hack Tuke, London; Dr. Clouston, Edinburgh; Dr. Yellowlees, Glasgow; Dr. Conolly Norman, Dublin; Dr. Kingsbury, Blackpool; Dr. Ross, Manchester; Dr. Drummond, Newcastle-on-Tyne; Dr. Suckling, Birmingham; Dr. Broadbent, London; Dr. T. Outterson Wood, London.

BLISTERING BY HYPNOTIC SUGGESTION.

In the *Bolnitchnaia Gazeta Botkina*, Nos. 26, 27, and 28, 1890, p. 650, Dr. Iakov V. Rybalkin, of St. Petersburg, publishes his remarkable experiments, which confirm the statements made by Presalmins (1840), Focachon, Beaunis, Delbœuf, Forel, Jendrassik, and Krafft-Ebing that cutaneous blisters can be raised by hypnotic suggestion. The author's experiments were performed in the presence of a number of the medical officers of the Mariïnskaia Infirmary, the subject being a strongly-made and well-nourished house-painter, aged 16, suffering from typical hysteria magna and extremely sensitive to hypnotising procedures and post-hypnotic suggestions. On February 21st, at 8.45 p.m., the patient was thrown into a deep hypnotic sleep, and then told that, after awakening, he was to shiver from cold and to approach a stove in the room in order to warm himself; when doing so he was to touch the stove with his right forearm and to contract a severe burn ("pain, redness, heat, bladder"), about the middle of the inner surface of the part. The suggestions were repeated thrice, after which the lad was ordered to awake. He obeyed all the suggestions in the strictest possible manner, and even loudly screamed from pain as soon as the suggested area came in contact with the stove (which was quite cold). On immediately inspecting the part a slight palish swelling, surrounded by a reddish zone, which proved to be painful on touch or pressure, was found exactly at the suggested point. The limb was at once bandaged, and the lad sent to bed (in the room). He could not fall asleep, however, being tormented by an acute "rending" pain caused by the "accident." On removing the bandage at 11 p.m. a considerable swelling with papular erythema was found, the adjacent zone, 4 or 5 centimètres wide, being exceedingly tender. The limb was again securely bandaged, and re-examined at 10 a.m. on the next morning, when there were found two slightly yellowish semitranslucent blisters as large as a nut and a pea respectively, and around them a group of smaller vesicles (each of the size of a pin's head). On another examination at 3 p.m. (eighteen hours after the "accident"), all the individual blisters proved to have coalesced into one large bladder. Two hours later the blister burst. The after-course presented nothing different from an ordinary case of burn.—*British Medical Journal*, Sept. 13, 1890.

TENTH INTERNATIONAL MEDICAL CONGRESS, BERLIN.

AUGUST 4-9, 1890.

SECTION FOR NEUROLOGY AND PSYCHIATRY.

Committee of Organization :

Binswanger	.	.	.	.	.	Jena.
Emminghaus	.	.	.	.	.	Freiburg.
Erb	.	.	.	.	.	Heidelberg.
Flehsig	.	.	.	.	.	Leipsig.
Fürstner	.	.	.	.	.	Heidelberg.
Grashey	.	.	.	.	.	München.

Hitzig	.	.	.	.	.	Halle.
Jolly	.	.	.	.	.	Strassburg.
Laehr	.	.	.	.	.	Berlin (Zehlendorf).

At the first meeting of the Section Dr. Laehr opened the proceedings, and announced that Professor Jolly, of Strassburg, was appointed President. Among others present were Drs. Mierzejewsky, Benedikt, Magnan, Meynert, Kjellberg, Schüle, Pelman, Mendel, Hitzig, Siemerling, Erlenmeyer, Morel, Steenberg, Witmer, Rutherford (Dumfries), Campbell Clark, Mickle, Richards, Hack Tuke, and Fletcher Beach.

Of the following list of papers presented to this Section some were not read for want of time.

The Section was attended by a large number, and the interest in the proceedings was well sustained. In a future number we shall give extracts of some of the papers.

FIRST SITTING: AUGUST 4TH.

Locomotor Ataxia: Dr. R. Brower, Chicago.

The Doctrine of Hæmato- and Syringomyelia: Dr. L. Minor, Moscow.

Akinesia Algera: Dr. Moebius, Leipzig.

SECOND SITTING: AUGUST 5TH.

The surgery of the central nervous system. Reporter: Professor Victor Horsley, London.

1. Mr. Burckhardt, Prefargier: Excision of the cortex as contribution to the surgical treatment of Psychosis.
2. Mr. L. Bremer, St. Louis: Microscopical demonstrations of the earliest lesions in the endothelium of the smaller cerebral vessels in a case of precocious brain syphilis.
3. Mons. Mies, Paris: On an instrument for the determination of corresponding points on the head, skull, and brain.
4. Mons. Magnan, Paris: Intermittent Insanity.
5. Hr. Binswanger, Jena: Cramps produced by experiments on the medulla of the dog.
6. Hr. C. v. Monakow, Zürich: On pathological Anatomy of cortical disturbances of sight (with Demonstrations).
7. Hr. Adamkiewicz, Krakau: On the Vascularization of the medulla.
8. Hr. Edg. Bérillon, Paris: Les indications formelles de l'hypnotisme et de la suggestion dans le traitement des maladies du système nerveux.

Papers announced late:—

1. Mr. Witmer, Washington: Insanity in the coloured race in America.
2. Mons. Regnier, Paris: Connection between cerebral syphilis and general paralysis.
3. Hr. O. Snell, Munich: Demonstration of spring buttons for fastening the clothing of the insane.
4. Mons. Thyssen: On Astasia-Abasia.

THIRD SITTING: WEDNESDAY, 6TH AUGUST.

Papers of Messrs. V. Horsley and Charles Beevor, London; Dr. Thyssen, Adamkiewicz, and Edg. Bérillon.

Paper announced late:—Edward Cowles, M.D., Boston: The Training of Nurses for the Insane.

FOURTH SITTING: THURSDAY, 7TH AUGUST.

Report: The traumatic neuroses. Reporter: Herr Schultze, Bonn.

Papers: Mr. Herbert W. Page, Gustaf Kjellberg, Kraepelin, Ladame, Sérieux, Kahlbaum, Edward C. Mann, Bérillon, J. Stewart.

Paper announced late:—Herr Stembo, Wilna: On the excitability of the nerves and muscles in Hypnotism.

FIFTH SITTING: FRIDAY, 8TH AUGUST.

Report: The pathological anatomy of dementia paralytica. Reporter: Mr. Mendel.

Papers by Messrs. Kraepelin, Ladame, Sérieux, Kahlbaum, Edward C. Mann, Bérillon, Homén, Magalhaes Lemos, Sachs, Pierre Marié, and George Marinesco.

SIXTH SITTING: SATURDAY 9TH AUGUST.

Before the programme: Mr. Minor, Moscow.

Papers by Messrs. James Stewart, Homén, Magalhaes Lemos, Althaus, Sachs, Pierre Marie and Marinesco, Bremer, Benedict, Dubois, Mordhorst, Neisser, Auerbach, Regnier, Stembo, Adamkiewicz.

The sections of Surgery, Neurology and Physiology combined, to hear the opening of the discussion on Cerebral Surgery by Professor Horsley. Professor Horsley's address was illustrated by lantern slides and carefully drawn up tables. He enumerated the various affections of the brain where surgical interference is indicated, and briefly dwelt on those lesions of the vertebral column and cord which require operation.

On Thursday, the sections of Laryngology, Physiology and Neurology combined, to hear an address by Dr. Semon, aided by a demonstration by Professor Horsley on Motor Innervation of the Larynx.

Interesting visits were made by the section to the Prison, which contained a department for 40 insane criminals; to the Charité, where Dr. Monakow illustrated, by microscopical sections, the pathological anatomy of cortical disturbances of sight; and to the Municipal Insane and Idiot Asylum at Dalldorf. The English members were taken round by Dr. Moeli, who speaks our English language almost perfectly, and were much interested in the idiot department, which contains 200 inmates.

IRISH MEETING.

At an Irish meeting of the Medico-Psychological Association, holden at the King and Queen's College of Physicians, Dublin, on Thursday, June 19, 1890, there were present Drs. Ashe, Cope, Drapes, Eustace, Finnegan, Molony, Nolan, Patton, and Conolly Norman (secretary).

Dr. EUSTACE having been called to the chair, the minutes of the preceding meeting in Ireland were read, confirmed, and signed.

The SECRETARY announced that he had received the resignation of Dr. Maziere Courtenay, long a member of the Association, and sometime Secretary for Ireland, who had recently been appointed Inspector of Lunatics in Ireland.

Vincent Nash, L.K.Q.C.P., second assistant to the Resident Medical Superintendent, Richmond (Dublin District) Asylum, was proposed for membership by Dr. CONOLLY NORMAN, seconded by Dr. COPE, and duly elected.

John R. Burke, M.D., Deputy Inspector General of Hospitals and Fleets, Royal Navy (retired), Assistant Physician, Dundrum Criminal Asylum, was proposed for membership by Dr. ASHE, seconded by Dr. NOLAN, and duly elected.

The SECRETARY read for Dr. Ringrose Atkins, of the Waterford District Asylum, a "Note on a case of vesical calculus occurring in a female patient." The woman was a patient in the Waterford Asylum, married, aged 25, admitted in October 1888, suffering from acute insanity of puerperal origin. The illness for a long time took an unfavourable course, and the patient became addicted to masturbation. In the beginning of the current June she passed a vesical calculus about the size of a thrush's egg, whether by the meatus urinarius or through the vesico-vaginal septum was not quite clear, as the patient could not be induced to permit a proper examination, but probably by the latter route. A marked improvement followed the passage of the stone, the patient ceased to masturbate and recovery was expected. It was found that the patient when

eleven or twelve years old had suffered from a similar calculus, which had been removed in a hospital by incising the vesico-vaginal wall. Both stones, which seemed to be chiefly phosphatic, were exhibited.

Dr. EUSTACE referred to the frequency with which masturbation was found to depend on some well-marked local cause.

Dr. CONOLLY NORMAN mentioned the case of a male patient to whom excessive masturbation was attributed, but who was found to be dying from stone. The specimens in this case are in the museum of Trinity College, to which the speaker had presented them. The kidneys are exquisite specimens of "surgical kidney."

Dr. FINNEGAN regretted that the stone which came away last in Dr. Atkins' case had not been cut like the earlier one, as he thought a foreign body would probably have been found forming the nucleus. He referred to a case of his in which a woman, not otherwise addicted to sexual depravity, had on one occasion placed a piece of lead pencil in her urethra, which had slipped into the bladder and become the nucleus of a phosphatic stone.

The Secretary exhibited for Dr. Ringrose Atkins a series of very beautiful microphotographs, made by that gentleman, illustrating the morbid changes in the brain and spinal cord produced by chronic alcoholism. The pictures showed the condition of the cortical arterioles, of the cortical cells, of the pia and its arterioles, and of the motor cells in the anterior cornu of the spinal cord. Dr. Atkins also sent a microphotograph showing the conditions found in miliary sclerosis of the spinal cord, and several photographs illustrating normal histological conditions.

Dr. EUSTACE briefly spoke of the value of Dr. Atkins' specimens as exhibiting a definite anatomical basis for the conditions with which clinical observation has made us so familiar.

Dr. CONOLLY NORMAN dwelt upon the beauty of Dr. Atkins' photographs, and upon the great importance of the work to which Dr. Atkins devotes himself—work unfortunately so rare in Ireland up to the present. He discussed briefly the relation of the states depicted to those occurring in general paralysis and in senile dementia.

After further remarks from various members, it was proposed by Dr. MOLONY, seconded by Dr. ASHE, and unanimously resolved that the thanks of the Association be tendered to Dr. Atkins for exhibiting these beautiful specimens of his excellent laboratory work.

Dr. CONOLLY NORMAN then read a paper on a "Case of intracranial tumour" (See Journal for July, 1890); which was discussed by Drs. EUSTACE, COPE, DRAPES, FINNEGAN, and MOLONY. He exhibited microscopic specimens in illustration of the case.

Dr. NORMAN also exhibited specimens of spinal cord stained by a modification of Adamkiewicz' method. The specimens were first stained in aniline blue-black, then in saffranin according to Adamkiewicz' instructions. The speaker thought that the preliminary staining in blue-black (fixed by the treatment with dilute nitric acid necessary to prepare for saffranin) gave a greatly increased brilliancy and distinctness to the double stain obtainable from saffranin alone in Adamkiewicz' method. The contrast between the orange-red myelin and the bright blue connective tissue was very effective in cases of degeneration. He had, however, found saffranin somewhat fugacious and uncertain, and he was not prepared to say whether these preparations would last.

Dr. FINNEGAN having referred to a resolution passed at the last Irish meeting (see J.M.S., Vol. 34, p. 629) with reference to holding at least one meeting in the year at an asylum, proposed "That the next Irish meeting of the Association be held at the Richmond Asylum, Dublin, during the month of October, 1890."

The resolution was seconded by Dr. DRAPES and passed.

The proceedings then terminated.

AFTER-CARE OF THE INSANE.

The After-care Association of the Insane, of which the Rev. Henry Hawkins, Colney Hatch, is the Honorary Secretary, continues to carry on such excellent work, and is one so little likely to achieve ordinary popularity, that we feel bound to say a specially good word for it. During the past year fifty cases of female convalescents leaving asylums for the insane in a poor and friendless condition have been dealt with. In nearly every case assisted suitable employment was afterwards found. Convalescents have been boarded out in cottages with great success, under the superintendence of local friends who have rendered most valuable assistance in finding suitable employment for a large number of the cases boarded out. The Earl of Meath, Dr. Hack Tuke, and Dr. T. Claye Shaw have been appointed trustees during the year. Cases have been assisted from eighteen different asylums. The Council feel that the warm co-operation and assistance of medical superintendents is vital to the success of their work, and it is sincerely hoped that many more will join the Society during the coming twelve months.—*Reprinted from the "British Medical Journal," June 14th, 1890.*

M.P.C. EXAMINATION.

Thursday, July 17th, 1890.

The following were the questions set at the Examination in London for the Certificate in Psychological Medicine and for the Gaskell Prize, the Examiners being Dr. Blandford and Dr. Rayner :—

Not more than four questions need be answered.

1.—Describe the symptoms of Acute Mania. What is the course, termination, and treatment of this disorder?

2.—Describe the onset of mental disorder in the Puerperal State?

3.—What are the points chiefly to be observed if you are consulted as to a patient's capacity to make a will, or enter into a contract?

4.—Describe Sporadic Cretinism.

5.—What are the terminations and causes of death in General Paralysis of the Insane? Describe the naked eye appearances seen after death in the brain.

6.—What is meant by the "insane ear?" Is it peculiar to the insane? What is its pathology and treatment?

The following candidates for the M.P.C. passed the Examination held at Bethlem Hospital, July 16th and 17th, 1890 :—

H. T. S. Aveline, M.R.C.S., L.R.C.P., Alfred W. Campbell, M.B., John Conry, M.B., Harry Corner, M.R.C.S., L.R.C.P.

The following candidates passed the Examinations held at Edinburgh, Glasgow and Aberdeen in July, 1890 :—

Edward H. Alexander, William Barbour, Robert C. Brodie, Samuel W. Carruthers, Sinclair Couper, George M. Cullen, Richard A. S. Eden, Frank A. Elkins, John A. Ewan, Alex. C. E. Gray, Gray Hassell, Peter R. Ingram, Annie W. Jagannadham, John M. Johnson, Alexander Kelso, Alexander L. Kerr, John Macdonald, Henry J. Mackenzie, William L. Mackenzie, George Mackie, Ernest L. Marsh, Landel R. Oswald, Charles P. Parry, Harry Rainy, M.A., Matthew A. Reid, William T. Scott, James Walker, George A. Watson, A. Maxwell Williamson, John T. Wilson, Henry J. Younger.

GASKELL PRIZE EXAMINATION, 1890.

Friday, July 18th, 1890.

MENTAL DISEASE.

- 1.—Give the chief characteristics of Alcoholic Insanity.
- 2.—What is Neurasthenia? How is it distinguished from Hysteria?
- 3.—Give some account of Diseased Cravings.
- 4.—What is Katatonia? Summarize the views of writers on this subject.
- 5.—Give an account of the Insanity of Pregnancy and its treatment.
- 6.—Describe the oculo-motor symptoms in General Paralysis of the Insane.

PATHOLOGY AND PSYCHOLOGY.

- 1.—Describe the changes in the membranes and cortex at a point of adhesion in General Paralysis.
- 2.—Describe the appearances found in Pachymeningitis.
- 3.—Describe the "Miliary Sclerosis" found in the brain of the Insane.
- 4.—Give an account of the Will. How far do the Phenomena of Insanity illustrate it?
- 5.—What is meant by "Automatism?" Give illustrations of it in Health and Disease.
- 6.—Explain the Pathology of Loss of Memory.

The successful candidate was Geo. M. Robertson, M.B., Assistant Medical Officer, Royal Asylum, Edinburgh.

Correspondence.

THE WORKING OF THE NEW LUNACY ACT.

We reprint the following letter from the *British Medical Journal* of July 19th, 1890, to assist in giving it the wide circulation which it deserves :—

SIR,—The following is a sample of the difficulties experienced in the working of the new Lunacy Act by those who are so unfortunate as to have insane relatives whose admission to a hospital or private asylum is necessary.

A young man, by occupation a pianoforte tuner, took to reading theology far into the night, and sometimes all night, as well as following his work by day, and this overstrain, together with the sudden shock, resulted in a mental breakdown. He was at first taken by his relatives to the seaside, but maniacal excitement came on, and he was brought to London and admitted to Bethlem Hospital on an urgency order and an urgency certificate, on July 6th. So far, all was satisfactory. Two fresh certificates were then duly obtained, and the "petition" and "statement" filled up properly by the patient's mother. On the evening of the 8th she went to a Justice of the Peace whose name I had given her from a long list of those specially appointed under the Lunacy Acts Amendment Act to act for the County of London, in order to fix a time with him for the consideration of the "petition." He refused to have anything to do with it, and referred her to the Marylebone Police Court. She, having to attend our Committee Meeting here the next morning, sent her daughter to the Court with the petition, and the latter was of course told that the petitioner must attend in person. She was given a list of four names

of Justices in Marylebone, and the mother proceeded to call on these *seriatim*. Three of the four were away, and the fourth said he could sign but did not care to, and that the Stipendiary Magistrate was the proper person. Finally, a Justice in Lambeth was applied to, and signed the "order" on July 11th, seven different authorities having been applied to before this end was arrived at.

I think it cannot be too widely known by medical men and the public generally what trouble the Lunacy Act of 1890 has thrown upon the relatives of patients. Here was a perfectly straightforward case of acute mania admitted as an urgent case, and the petition, statement, and certificate all in order, and yet the relatives are bandied about from a Justice to the Police Court, from the Police Court to four Justices, from one of these again (three of them being unavailable) to the Stipendiary Magistrate, till finally the order is signed by a Justice. It may be said that all this time the patient was in safety, but surely it is little short of cruelty to those who have just had the care of a dangerous lunatic in a private house, with all the attendant anxiety and nervous strain, to add this additional worry.

The Act says:—"In making such appointments (that is, of Justices to exercise the powers conferred by this Act), the Justices of every County shall have regard to the convenience of the inhabitants of each Petty Sessional Division thereof." Yet in this case, in one Petty Sessional Division of the County of London, three out of the four Justices are not available, and the fourth refuses to sign, and one might say that absolutely no regard was paid to the convenience of this particular petitioner. In other cases, I have known of hard-working and struggling business-men having to spend two or three days rushing after Magistrates and Justices, while their business or trade was going to ruin, in order to satisfy the requirements of this irritating Act. The Lord Chancellor has the power, in the event of inability or refusal of a Justice to act, to appoint another, but if constant changes of this sort are to take place, there seems to be little use in a published list of Justices specially appointed. It is practically useless for the petitioner ever to apply to a Police Court or County Court for a reception order, as the officials usually say (as the Act gives them power to do) that the consideration of the petition interferes with the exercise of their ordinary jurisdiction, and if the Justices of the Peace "boycott" the Act, as many of them seem inclined to do, the relatives of lunatics will be in a sad plight. One might enter at length into the imperfect way in which the Justices examine the petitions and certificates presented to them, and how, consequently, patients are brought for admission with reception orders signed, although there are important omissions in the petition or in the statement, or even in the reception order itself; but my object was not so much to show how the work of Medical Superintendents is increased by their having to supervise the work of the very men who are supposed to be appointed to prevent mistakes in the admission of patients, as to give an instance of the hard working of this injudicious

Act, which seems to have been specially framed to strain to the utmost the already neurotic relations of lunatics, and to drive Superintendents of Asylums and Hospitals to madness. Unfortunately, no representations as to the mischievous working of this Act are likely to receive much notice from its framers, who showed but scant courtesy to those familiar with lunacy work while the Bill was in progress; but, at least, it might be claimed that the Magistrates and Justices should properly perform their part of the work. It does not seem to be generally understood that a Justice of the Peace in one division of the County of London may still sign a reception order, though the patient happens to have been removed to another division, and perhaps already admitted to a hospital or asylum under an urgency order. Apologizing for trespassing at such length on your valuable space,

I am, etc.,

R. PERCY SMITH.

Bethlem Royal Hospital.

Obituary.

DR. JOHN S. BUTLER

Was Superintendent of the Retreat for the Insane, Hartford, Connecticut, during nearly thirty years. He was born in Hartford, but his parents, when he was quite young, removed to Northampton, Massachusetts, where he passed the years of his boyhood.

Dr. Butler graduated from Yale College with the degree of B.A., in 1825, and immediately entered on the study of medicine at the University of Pennsylvania, in Philadelphia. He took the degree of M.D. in 1828, and soon afterwards began the general practice of medicine in the city of Worcester, Massachusetts, where he remained ten years. It was during this period that the Massachusetts Lunatic Hospital was erected at Worcester, and opened for patients under the superintendency of Dr. Samuel B. Woodward, who afterwards became the first President of the Association of Superintendents of American Institutions for the Insane. Dr. Butler here formed the acquaintance of Dr. Woodward, and also became greatly interested in his methods of treatment and care of the insane, and it was due to the influence of Dr. Woodward, at least in some measure, that Dr. Butler left the general practice of medicine in Worcester, and went to Boston, where he afterwards became the Superintendent of the Boston Lunatic Hospital. He, however, retained this position only about two years.

In 1843 Dr. Butler was appointed Superintendent of the Retreat at Hartford. He succeeded in this position Dr. Amariah Brigham, who left the Retreat to become Superintendent of the State Lunatic Hospital at Utica, New York, which was then in process of erection.

As already intimated, it was at the Retreat that Dr. Butler passed the larger portion of his active professional life. It was during his superintendency that the buildings which now comprise the fourth and fifth halls were erected.

During 1868 and 1869 the series of improvements, consisting in the remodelling of the second, first, third, and parlour halls, both north and south, were consummated. He also raised funds by solicitation of subscriptions, mainly in Hartford, for grading and rearranging the grounds of the Retreat, whereby the present lawn, which is celebrated for its attractions, became possible.

Dr. Butler, in his 70th year, left the Retreat and had the care of a private patient during several years. He afterwards was Chairman of the State Board of Health, and wrote its first report.

He retained his interest in his profession, and to some degree in that department of it in which he was so long an active member, to the last. He was especially happy in his methods of conversation and association with the insane, and had the faculty of securing the confidence of his patients.

It is to be regretted, in view of his long professional career and large experience with the insane, that his contributions to medical literature were not more numerous. They consisted mainly in his yearly reports, and a small volume on "The Curability of Insanity."

Dr. Butler was one of the founders of the Association of Superintendents, and during many years a regular attendant at its meetings. The Association met at Hartford in 1870, and elected Dr. Butler as President.

He was very social, and delighted in story-telling. He was especially fond of the society of the younger members of the profession, and retained his habit of associating much with them until near the last.

His health was remarkably good until about two months before his death, when he had a slight attack of paralysis. He, however, soon rallied from the more immediate effects of this, but thenceforth gradually failed, and died May 21st, 1890.

H. P. S.

NOVEL BY A MEDICAL PSYCHOLOGIST.

During the last few years instances have not been wanting of members of our Profession indulging in romance. The names of Sir Henry Thompson, Dr. B. W. Richardson, Dr. Weir Mitchell, will at once occur to the reader. We understand that another proof that medical science is consistent with the composition of fiction is shortly to come from the ranks of our own special branch of Medicine. A member of the Medico-Psychological Association has in the press an historical novel entitled "In the Days of Akber and Elizabeth." It relates the fortunes of the crew of the *Unicorn*, the first ship which left England to open up the trade with India. The scene is laid principally in Surat, Ahmadnagar and Agra. The literary ability of the author, combined with psychological insight and original thought, promises a work which will have a special interest for the readers of the "Journal of Mental Science."

Appointments.

ANDERSON, T., M.D. Lond., appointed Consulting Physician to the York Lunatic Asylum.

AVELINE, H. T. S., M.R.C.S., L.R.C.P. Lond., appointed Assistant Medical Officer to the Bristol City Lunatic Asylum.

GREATBATCH, HERBERT W., M.B., C.M. Edin., appointed Junior Assistant Medical Officer to the Montrose Royal Asylum.

HAVELOCK, JOHN G., M.B., C.M. Edin., appointed Assistant Medical Officer of the Royal Lunatic Asylum, Montrose.

HICKS, J. ABERNETHY, jun., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Third Assistant Medical Officer to the Whittingham County Asylum, Preston, Lancashire.

HOWDEN, JAS. C., M.D. Edin., re-appointed Medical Superintendent of the Royal Asylum, Montrose.

JOHNSTON, DAVID, M.D. Aberd., re-appointed Consulting Physician to the Royal Lunatic Asylum and Infirmary, Montrose.

SUFFERN, A. C., M.D., M.Ch., has been appointed Medical Superintendent of the Rubery Hill Asylum, *vice* Thomas Lyle, resigned.

SYRÉE, ANTON HUGH, M.R.C.S., L.S.A. Lond., Assistant Medical Officer to the Wilts Asylum, appointed Assistant Medical Officer to the City of London Asylum.



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1880. Agar, S. H., L.K.Q.C.P., Hurst House, Henley-in-Arden.

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1890. Alexander, Robert Reid, M.D. Aber., Medical Superintendent, Male Department Hanwell Lunatic Asylum.
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- * Baillarger, M., M.D., Member of the Academy of Medicine, formerly Visiting Physician to the Salpêtrière; 7, Rue de l'Université, Paris. (*Hon. Member.*)
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1881. Brayn, R., L.R.C.P. Lond., Invalid Convict Prison, Knapp Hill, Woking.
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1860. Christie, Thomas B., C.I.E., M.D. St. And., F.R.S.E., F.R.C.P. Lond., F.R.C.P. Edin., Medical Superintendent, Royal India Lunatic Asylum, Ealing, W. (*Hon. General Secretary, 1872.*)

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 1878. Clapham, Wm. Crochley S., M.D., M.R.C.P., The Grange, Rotherham.
 1863. Clapton, Edward, M.D. Lond., F.R.C.P. Lond., Physician, St. Thomas's Hospital, Visitor of Lunatics for Surrey; 10A, St. Thomas Street, Borough.
 1879. Clark, Archibald C., M.D. Edin., Medical Superintendent, Glasgow District Asylum, Bothwell.
 1879. Clarke, Henry, L.R.C.P. Lond., H.M. Prison, Wakefield.
 * } Cleaton, John D., M.R.C.S. Eng., Commissioner in Lunacy, 19, Whitehall
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 1862. Clouston, T. S., M.D. Edin., F.R.C.P. Edin., F.R.S.E., Physician Superintendent, Royal Asylum, Morningside, Edinburgh. (*Editor of Journal*, 1873-1881.) (PRESIDENT 1888.)
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1872. Fraser, John., M.B., C.M., Deputy Commissioner in Lunacy, 19, Strathearn Road, Edinburgh.
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1886. Harvey, Crosbie Bagenal, L.A.H., Asst. Med. Officer, District Asylum, Clonmel.
1875. Haughton, Rev. Professor S., School of Physic, Trinity Coll., Dublin, M.D., T.C.D., D.C.L. Oxon, F.R.S. (*Hon. Member.*)
1868. Hearder, George J., M.D. St. And., L.R.C.S. Edin., Medical Superintendent, Joint Counties Asylum, Carmarthen.
1885. Henley, E. W., L.R.C.P., County Asylum, Gloucester.
1877. Hetherington, Charles, M.B., Med. Supt., District Asylum, Londonderry, Ireland.
1877. Hewson, R. W., L.R.C.P. Ed., Med. Supt., Coton Hill, Stafford.
1879. Hicks, Henry, M.D. St. And., M.R.C.S. Eng., F.R.S., F.G.S., Hendon Grove House, Hendon, Middlesex.
1879. Higgins, Wm. H., M.B., C.M., Med. Supt., County Asylum, Leicester.
1882. Hill, Dr. H. Gardiner, Medical Superintendent, Surrey County Asylum, Tooting.
1857. Hills, William Charles, M.D. Aber., M.R.C.S. Eng., Thorpe-St. Andrew, near Norwich.
1889. Hind, Hy. Joseph, M.R.C.S. and L.S.A., Assistant Medical Officer, The Retreat, York.
1871. Hingston, J. Tregelles, M.R.C.S. Eng., Medical Superintendent, North Riding Asylum, Clifton, York.
1881. Hitchcock, Charles Knight, M.D., Bootham Asylum, York.
- * Hitchman, J., M.D. St. And., F.R.C.P. Lond., F.R.C.S. Eng., late Medical Superintendent, County Asylum, Derby; The Laurels, Fairford. (PRESIDENT, 1856.)
1863. Howden, James C., M.D. Edin., Medical Superintendent, Montrose Royal Lunatic Asylum, Sunnyside, Montrose.
1881. Hughes, C. H., M.D., St. Louis, Missouri, United States. (*Hon. Member.*)
1857. Humphry, John, M.R.C.S. Eng., Medical Superintendent, County Asylum, Aylesbury, Bucks.
1888. Hyslop, Theo. B., M.B., C.M. Edin., M.P.C., Asst. Med. Officer, Bethlem Royal Hospital, S.E.
1882. Hyslop, James, M.D., Pietermaritzburg Asylum, Natal, S. Africa.
1865. Iles, Daniel, M.R.C.S. Eng., Resident Medical Officer, Fairford House Retreat, Gloucestershire.
1871. Ireland, W. W., M.D. Edin., Preston Lodge, Prestonpans, East Lothian.
1877. Isaac, J. B., M.D. Queen's Univ., Irel., Assist. Med. Officer, Broadmoor, near Wokingham.
1866. Jackson, J. Hughlings, M.D. St. And., F.R.C.P. Lond., Physician to the Hospital for Epilepsy and Paralysis, &c.; 3, Manchester Square, London, W.
1858. Jamieson, Robert, M.D. Edin., L.R.C.S. Edin., Medical Superintendent, Royal Asylum, Aberdeen.
1860. Jepson, Octavius, M.D. St. And., M.R.C.S. Eng., Elmfield, Newlands Park, Sydenham, S.E.
1882. Jeram, J. W., L.R.C.P., Hambledon, Cosham, Hants.
1885. Johnston, D. G., M.B., C.M. Glas., Med. Supt., Moorcroft House, Hillingdon, Middlesex.
1878. Johnstone, J. Carlyle, M.D., C.M., Medical Superintendent, Roxburgh District Asylum, Melrose.
1866. Jones, Evan, M.R.C.S. Eng., Ty-mawr, Aberdare, Glamorganshire.

1880. Jones, D. Johnson, M.D. Edin., Senior Assistant Medical Officer, Banstead Asylum, Surrey.
1882. Jones, R., M.D. Lond., B.S., F.R.C.S., Earlswood Asylum, Surrey.
1879. Kay, Walter S., M.D., Medical Superintendent, South Yorkshire Asylum, Wadsley, near Sheffield.
1886. Keay, John, M.B., Med. Supt., Mavisbank, Polton, Midlothian.
1885. Keegan, J. T., Indianapolis, Ind., U.S.A.
1889. Keyt, Fred., M.B., C.M. Aberd., M.P.C., Assistant Medical Officer, Kent County Asylum, Barming Heath.
1886. Koch, Vincent, M.B., C.M., De La Pole, Willerby, Hull.
1880. Kornfeld, Dr. Herman, Grottkau, Silesia, Germany. (*Corresponding Member.*)
1889. Kowalewsky, Professor Paul, Kharkoff, Russia. (*Corresponding Member.*)
1881. Krafft-Ebing, R. v., M.D., Vienna. (*Hon. Member.*)
1866. Laehr, H., M.D., Schweizer Hof, bei Berlin, Editor of the "Zeitschrift für Psychiatrie." (*Hon. Member.*)
1890. Law, John Spence, M.B., C.M. Edin., Junior Assistant Medical Officer, North Riding Asylum, Clifton, Yorks.
1870. Lawrence, A., M.D., County Asylum, Chester.
1883. Layton, Henry A., L.R.C.P. Edin., Cornwall County Asylum, Bodmin.
1883. Legge, R. J., M.D., Assist. Med. Officer, County Asylum, Derby.
1887. Lentz, Dr., Asile d'Aliénés, Tournai, Belgique. (*Hon. Member.*)
1858. Lewis, Henry, M.D. Bruss., M.R.C.S. Eng., L.S.A., late Assistant Medical Officer, County Asylum, Chester; West Terrace, Folkestone, Kent.
1879. Lewis, W. Bevan, L.R.C.P. Lond., Med. Supt., West Riding Asylum, Wakefield.
1863. Ley, H. Rooke, M.R.C.S. Eng., Medical Superintendent, County Asylum, Prestwich, near Manchester.
1888. Liddell, J., M.A., M.B., C.M. Edin., Assist. Med. Officer, Kent County Asylum, Barming Heath.
1859. Lindsay, James Murray, M.D. St. And., F.R.C.S. and F.R.C.P. Edin., Med. Supt., County Asylum, Mickleover, Derby.
1883. Lisle, S. Ernest de, L.K.Q.C.P., Three Counties Asylums, Stotfold, Baldock.
1888. Little, W. Maxwell, M.D. Edin., Assist. Med. Off., County Asylum, Thorpe, Norwich.
1888. Lofthouse, Arthur, M.R.C.S., etc., Assist. Med. Off., County Asylum, Nottingham.
1872. Lyle, Thos., M.D. Glas., late Medical Superintendent, Rubery Hill Asylum, near Bromsgrove, Worcestershire.
1880. MacBryan, Henry C., Tue Villa, Liverpool.
1884. Macdonald, P. W., M.D., C.M., Med. Supt., County Asylum, near Dorchester, Dorset.
1883. Macfarlane, W. H., New Norfolk Asylum, Tasmania.
1884. Mackew, S., M.B. Edin., Hertford British Hospital, Rue de Villiers, Levallois-Perret, Seine.
1886. Mackenzie, J. Cumming, M.B., C.M., M.P.C., County Asylum, Morpeth.
- * Mackintosh, Donald, M.D. Durham and Glas., L.F.P.S. Glas., 10, Lancaster Road, Belsize Park, N.W.
1886. Maclean, Allan, L.R.C.S. Ed., Harpenden Hall, Herts.
1873. Macleod, M. D., M.B., Med. Superintendent, East Riding Asylum, Beverley, Yorks.
1882. Macphail, Dr. S. Rutherford, Derby Borough Asylum, Rowditch, Derby.
1872. Major, Herbert, M.D., 154, Manningham Lane, Bradford, Yorks, *vid* Wakefield.
- * Manley, John, M.D. Edin., M.R.C.S. Eng., Denton House, Victoria Road, Southsea, Hants.
1871.) Manning, Frederick Norton, M.D. St. And., M.R.C.S. Eng., Inspector of
1884.) Asylums for New South Wales, Sydney. (*Hon. Member.*)
1865. Manning, Harry, B.A. London, M.R.C.S., Laverstock House, Salisbury.
1888. Manson, Magnus O., B.A., L.R.C.P., etc., County Asylum, Haywards Heath, Sussex.
1871. Marsh, J. Wilford, M.R.C.S. Eng., L.S.A., Medical Superintendent, County Asylum, Lincoln.
- * Marshall, William G., F.R.C.S., late Medical Superintendent, County Asylum, Colney Hatch, Middlesex.

1889. Raw, Nathan., M.D., M.P.C., Assistant Medical Officer, Lunatic Asylum, Milton, Portsmouth.
1890. Regis, Dr. E., Castel D'Andorte, Beusca, près Bordeaux. (*Corresponding Member.*)
1887. Reid, William, M.D., Royal Asylum, Aberdeen.
1886. Revington, Geo., M.D. Asst. Med. Off., Prestwich Asylum, Manchester.
1888. Reynolds, Graham H., M.B., C.M., Barnwood House, Gloucester.
1889. Richards, Joseph Peeke, M.R.C.S., L.S.A., Medical Superintendent, Female Department, Hanwell Asylum, W.
1869. Richardson, B. W., M.D. St. And., F.R.S., 25, Manchester Square, W. (*Hon. Member.*)
1890. Ritti, Dr. J. M., Maison Nationale de Charenton, St. Maurice, Seine, France. (*Corresponding Member.*)
1871. Robertson, Alexander, M.D. Edin., 16, Newton Terrace, Glasgow.
- * Robertson, Charles A. Lockhart, M.D. Cantab., F.R.C.P. Lond., F.R.C.P. Edin., Lord Chancellor's Visitor, New Law Courts, Strand, W.C. (*General Secretary, 1855-62.*) (*Editor of Journal, 1862-70.*) (*PRESIDENT, 1867.*) (*Hon. Member.*)
1887. Robertson, G. M., M.B., C.M., M.P.C., Assistant Med. Off., Royal Asylum, Morningside, Edinburgh.
1876. Rogers, Edward Coulton, M.R.C.S. Eng., L.S.A., Co. Asylum, Fulbourn, Cambridge.
1859. Rogers, Thomas Lawes, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., 9, Shooter's Hill Road, Blackheath. (*PRESIDENT, 1874.*)
1879. Ronaldson, J. B., L.R.C.P. Edin., Medical Officer, District Asylum, Haddington.
1879. Roots, William H., M.R.C.S., Canbury House, Kingston-on-Thames.
1860. Rorie, James, M.D. Edin., L.R.C.S. Edin., Medical Superintendent, Royal Asylum, Dundee. (*Late Hon. Secretary for Scotland.*)
1888. Ross, Chisholm, M.B. Ed., M.D. Sydney, Gladesville Asylum, New South Wales.
1890. Ross, James, M.D. Aber., F.R.C.P. Lond., Physician, Manchester Royal Infirmary, 14, St. John Street, Manchester.
1886. Roussel, M. Théophile, M.D., Sénateur, Paris. (*Hon. Member.*)
1884. Rowe, E. L., L.R.C.P. Ed., Medical Superintendent, Borough Asylum, Ipswich.
1883. Rowland, E. D., M.D., C.M. Edin., the Public Lunatic Asylum, Berbice, British Guiana.
1877. Russell, A. P., M.B. Edin., The Lawn, Lincoln.
1883. Russell, F. J. R., L.K.Q.C.P. Irel., 4, Edward Road, St. Leonards-on-Sea.
1886. Rutherford, R. L., M.D., Medical Superintendent, City Asylum, Digby's, near Exeter.
1866. Rutherford, James, M.D. Edin., F.R.C.P. Edin., F.F.P.S. Glasgow, Physician Superintendent, Crichton Royal Institution, Dumfries. (*Hon. Secretary for Scotland, 1876-86.*)
1887. Rutherford, W., M.D., Consulting Physician, Ballinasloe District Asylum, Ireland.
1889. Ruxton, William Ledington, M.D. and C.M., Assistant Medical Officer, South Yorkshire Asylum, Wadsley, Sheffield.
1889. Samuelson, Gerald S., M.B. and C.M. Edin., late Junior Assistant Medical Officer, Wilts County Asylum, Devizes.
1879. Sankey, H. R., M.B., Boreatton Park, Shrewsbury.
- * Sankey, R. Heurtley H., M.R.C.S. Eng., Medical Superintendent, Oxford County Asylum, Littlemore, Oxford.
1873. Savage, G. H., M.D. Lond., 3, Henrietta Street, Cavendish Square, W. (*Editor of Journal.*) (*PRESIDENT, 1886.*)
1862. Schofield, Frank, M.D. St. And., M.R.C.S., Medical Supt., Camberwell House, Camberwell.
1887. Schüle, Heinrich, M.D., Illenau, Baden, Germany. (*Hon. Member.*)
1884. Scott, J. Walter, M.R.C.S., M.P.C., Highfield, Tulse Hill, S.W.
1889. Scowcroft, Walter, M.R.C.S., Senior Assistant Medical Officer, Royal Lunatic Hospital, Cheadle.
1880. Seccombe, Geo., L.R.C.P.L., The Colonial Lunatic Asylum, Port of Spain, Trinidad, West Indies.
1879. Seed, Wm., M.B., C.M. Edin., Assistant Medical Officer, Whittingham Asylum, Lancashire.

1889. Sells, Charles John, L.R.C.P., M.R.C.S., L.S.A., Honorary Medical Officer, Royal Surrey County Hospital; White Hall, Guildford.
1885. Sells, H. T., 2, London Road, Northfleet, Kent.
1881. Semal, M., M.D., Mons, Belgium. (*Hon. Member.*)
1882. Seward, W. J., M.D., Med. Superintendent, Colney Hatch, Middlesex.
1867. Shaw, Thomas C., M.D. Lond., F.R.C.P. Lond., Medical Superintendent, Middlesex County Asylum, Banstead, Surrey.
1880. Shaw, James, M.D., 63, Kensington, Liverpool.
1882. Sheldon, T. S., M.B., Med. Supt., Cheshire County Asylum, Parkside, Macclesfield.
1886. Sherrard, C. D., M.R.C.S., Avalon, Eastbourne.
1877. Shuttleworth, G. E., M.D. Heidelberg, M.R.C.S. and L.S.A. Eng., B.A. Lond., Medical Superintendent, Royal Albert Asylum, Lancaster.
1880. Sibbald, John, M.D. Edin., F.R.C.P. Ed., M.R.C.S. Eng., Commissioner in Lunacy for Scotland, 3, St. Margaret's Road, Edinburgh. (*Editor of Journal, 1871-72.*) (*Hon. Member.*)
1889. Simpson, Samuel, M.B. and M.C.H. Dublin, M.P.C., Assistant Medical Officer, Peckham House, Peckham.
1888. Sinclair, Eric, M.D., Med. Supt., Gladesville Asylum, New South Wales.
1870. Skae, C. H., M.D. St. And., Medical Superintendent, Ayrshire District Asylum, Glengall, Ayr.
1889. Skinner, Robert Vaile, M.R.C.S., L.S.A., Medical Superintendent and Proprietor Periteau House Asylum, Winchelsea, Sussex.
1875. Smith, Patrick, M.A. Aberdeen, M.D. Sydney, New South Wales, Resident Med. Officer, Woogaroo Lunatic Asylum, Brisbane, Queensland, Australia.
1858. Smith, Robert, M.D. Aberd., L.R.C.S. Edin., Medical Superintendent, County Asylum, Sedgfield, Durham.
1886. Smith, R. Gillies, M.R.C.S., B.Sc. Lond., Assistant Medical Officer, Lancashire County Asylum.
1885. Smith, R. Percy, M.D., B.S., F.R.C.P., M.P.C., Bethlem Hospital, St. George's Road, S.E.
1890. Smith, Telford, M.D. Dub., Assistant Medical Officer, Royal Albert Asylum, Lancaster.
1884. Smith, W. Beattie, F.R.C.S. Ed., L.R.C.P. Lond., Medical Supt., Hospital for the Insane, Ararat, Victoria.
1889. Smith, William Robert, M.D., D.Sc., F.R.S. Edin., 74, Great Russell Street, Bloomsbury Square, London.
1890. Smyth, William Johnson, M.B., C.M. Edin., M.P.C., Senior Assistant Medical Officer, Kent County Asylum, Maidstone.
1881. Snell, Geo., M.R.C.S., Asst. Med. Off., Berbice, British Guiana.
1885. Soutar, J. G., Barnwood House, Gloucester.
1875. Spence, James B., M.D. Ire., Med. Supt., Burntwood Asylum, Lichfield.
1883. Spence, J. B., M.D., M.C. Edinburgh, Asylum for the Insane, Ceylon.
1863. Spencer, Robert, M.R.C.S. Eng., Med. Superintendent, Kent County Asylum, Chartham, near Canterbury.
1879. Squire, R. H., B.A. Cantab., Assist. Medical Officer, Whittingham Asylum, Lancashire.
1888. Stearns, H. P., M.D., The Retreat, Hartford, Conn., U.S.A. (*Hon. Member.*)
1868. Stewart, James, B.A. Queen's Univ., M.R.C.P. Edin., L.R.C.S. Ireland, late Assistant Medical Officer, Kent County Asylum, Maidstone; Dunmurry, Sneyd Park, Clifton, Gloucestershire.
1884. Stewart, Robert S., M.D., C.M., Assistant Medical Officer, County Asylum, Glamorgan.
1887. Stewart, Rothsay C., M.R.C.S., Assist. Med. Officer, County Asylum, Leicester.
1862. Stilwell, Henry, M.D. Edin., M.R.C.S. Eng., Moorcroft House, Hillingdon, Middlesex.
1864. Stocker, Alonzo Henry, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., Medical Superintendent, Peckham House Asylum, Peckham.
1887. Stoker, Wm. Thornley, M.D., Surgeon, St. Patrick's Hospital, 16, Harcourt Street, Dublin.
1881. Strahan, S. A. K., M.D., Assist. Med. Officer, County Asylum, Berrywood, near Northampton.
1868. Strange, Arthur, M.D. Edin., Medical Superintendent, Salop and Montgomery Asylum, Bicton, near Shrewsbury.

1885. Street, C. T., M.R.C.S., L.R.C.P., Haydock Lodge, Ashton, Newton-le-Willows, Lancashire.
1886. Suffern, A. C., M.D., Medical Superintendent, Rubery Hill Asylum, near Bromsgrove, Worcestershire.
1870. Sutherland, Henry, M.D. Oxon, M.R.C.P. Lond., 6, Richmond Terrace, Whitehall, S.W.; Newlands House, Tooting Bec Road, Tooting Common, S.W.; and Otto House, 47, Northend Road, West Kensington, W.
1871. Sutton, H. G., M.D. Lond., F.R.C.P., Physician to the London Hospital, 9, Finsbury Square, E.C.
1868. Swain, Edward, M.R.C.S., Medical Superintendent, Three Counties' Asylum, Stotfold, Baldock, Herts.
1877. Swanson, George J., M.D. Edin., Lawrence House, York.
1887. Symes, G. D., M.R.C.S., M.P.C., County Asylum, Rainhill, Lancashire.
1890. Syré, Auton Hugh, M.R.C.S. & L.S.A., Assistant Medical Officer, City of London Asylum, Stone, Dartford, Kent.
1881. Tamburini, A., M.D., Reggio-Emilia, Italy. (*Hon. Member.*)
1857. Tate, William Barney, M.D. Aberd., M.R.C.P. Lond., M.R.C.S. Eng., Med. Supt. of the Lunatic Hospital, The Coppice, Nottingham.
1888. Thomas, E. G., M.B. Edin., Ass. Med. Off., Caterham Asylum, Surrey.
1880. Thomson, D. G., M.D., C.M., Med. Supt., County Asylum, Thorpe, Norfolk.
1878. Thurnam, Francis Wyatt, M.B. Edin., C.M., 40, South Grove, Highgate, N.
1861. Toller, Ebenezer, M.R.C.S. Eng., formerly Med. Supt. of St. Luke's Hospital, London, late Supt. of the Gloucester County Asylum, 10, Royal Crescent, Holland Park, W.
1885. Townsend, W. C., M.D., Visiting Physician, District Asylum, Cork.
1866. Tuke, John Batty, M.D. Edin., 20, Charlotte Square, Edinburgh. (*Hon. Secretary for Scotland, 1869-72.*)
1888. Tuke, John Batty, Junior, M.B., C.M., M.R.C.P.E., Resident Physician, Saughton Hall, Edinburgh.
- * Tuke, D. Hack, M.D. Heidel., F.R.C.P. Lond., M.R.C.S. Eng., LL.D., formerly Visiting Physician, The Retreat, York; Lyndon Lodge, Hanwell, W., and 63, Welbeck Street, W. (*Editor of Journal.*) (*PRESIDENT, 1881.*)
1881. Tuke, Chas. Molesworth, M.R.C.S., Manor House, Chiswick.
1885. Tuke, T. Seymour, M.R.C.S., Manor House, Chiswick.
1877. Turnbull, Adam Robert, M.B., C.M. Edin., Medical Superintendent, Fife and Kinross District Asylum, Cupar.
1889. Turner, Alfred, M.D. and C.M., Assistant Medical Officer, West Riding Asylum, Menston, Yorkshire.
1890. Turner, John, M.B., C.M. Aber., Senior Assistant Medical Officer, Essex County Asylum.
1878. Urquhart, Alexr. Reid, M.D., Physician Supt., James Murray's Royal Asylum, Perth. (*Hon. Secretary for Scotland.*)
1881. Virchow, Prof. R., University, Berlin. (*Hon. Member.*)
1881. Voisin, A., M.D., 16, Rue Séguin, Paris. (*Hon. Member.*)
1876. Wade, Arthur Law, B.A., M.D. Dub., Med. Supt., County Asylum, Wells, Somerset.
1884. Walker, E. B. C., M.B., C.M. Edin., Assist. Med. Officer, County Asylum, Haywards Heath.
1877. Wallace, James, M.D., Visiting Medical Officer, Parochial Asylum, Greenock.
1876. Wallis, John A., M.D. Aberd., L.R.C.P. Edin., Medical Superintendent, County Asylum, Whittingham, Lancashire.
1883. Walmsley, F. H., M.D. Leavesden Asylum, Watford, Herts.
1873. Ward, Frederic H., M.R.C.S. Eng., L.S.A., Assistant Medical Officer, County Asylum, Tooting, Surrey.
1871. Ward, J. Bywater, B.A., M.D. Cantab., M.R.C.S. Eng., Medical Superintendent, Warneford Asylum, Oxford.
1889. Warnock, John, M.D., C.M., B.Sc., M.R.C.S., Medical Superintendent, Northumberland House, Finsbury Park, London.
1885. Watson, William Riddell, L.R.C.S. & P. Edin., Govan Parochial Asylum, Glasgow.
1880. Weatherly, Lionel A., M.D., Bailbrook House, Bath.
1880. West, Geo. Francis, L.R.C.P. Edin., Assist. Med. Officer, District Asylum, Omagh, Ireland.

1889. West, John Arthur, L.R.C.P., M.R.C.S., and L.S.A., 113, King Henry's Road, London.
1872. Whitcombe, Edmund Banks, Esq., M.R.C.S., Med. Supt., Winson Green Asylum, Birmingham. (PRESIDENT ELECT.)
1884. White, Ernest, M.B. Lond., M.R.C.P., City of London Asylum, Stone, Dartford, Kent.
1889. Whitwell, James Richard, M.D. and C.M., Assistant Medical Officer, West Riding Asylum, Menston, near Leeds.
1870. Wickham, R. H. B., F.R.C.S. Edin., 6, Barton Crescent, Dawlish, South Devon.
1883. Wigglesworth, J., M.D. Lond., Rainhill Asylum, Lancashire.
1857. Wilkes, James, F.R.C.S. Eng., late Commissioner in Lunacy; 18, Queen's Gardens, Hyde Park. (*Hon. Member.*)
1887. Will, Jno. Kennedy, M.B., C.M., M.P.C., Bethnal House, Cambridge Road, E.
1857. Willett, Edmund Sparshall, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., Wyke House, Sion Hill, Isleworth, Middlesex; and 4, Suffolk Place, Pall Mall.
1862. Williams, S. W. Duckworth, M.D. St. And., L.R.C.P. Lond., The Maze, Lansdowne Road, Bournemouth.
1863. } Williams, W. Rhys, M.D. St. And., M.R.C.P. Ed., F.K. and Q.C.P., Irel.,
1878. } late Commissioner in Lunacy, Linden House, Bertie Road, Leamington. (*Hon. Member.*)
1885. Wilson, G. V., M.D., Assist. Med. Officer, District Asylum, Cork.
1881. Wilson, Jno. H. Parker, H.M. Convict Prison, Brixton.
1875. Winslow, Henry Forbes, M.D. Lond., M.R.C.P. Lond., 14, York Place, Portman Square, London, and Hayes Park, Hayes, near Uxbridge, Middlesex.
- * Wood, William, M.D. St. And., F.R.C.P. Lond., F.R.C.S. Eng., Visiting Physician, St. Luke's Hospital, formerly Medical Officer, Bethlehem Hospital; The Priory, Roehampton. (PRESIDENT, 1865.)
1879. Wood, Wm. E. R., M.A., M.B., F.R.C.S. Edin., The Priory, Roehampton.
1869. Wood, T. Outterson, M.D., M.R.C.P. Lond., F.R.C.P., F.R.C.S. Edin., 40, Margaret Street, Cavendish Square, W.
1869. Wood, B. T., Esq., M.P., Chairman of the North Riding Asylum, Conyng- ham Hall, Knaresboro. (*Hon. Member.*)
1873. Woods, Oscar T., M.B., M.D. (Dub.), L.R.C.S.I., Medical Superintendent, District Asylum, Cork.
1885. Woods, J. F., M.R.C.S., Med. Supt., Hoxton House, N.
1890. Woodward, William, L.R.C.P., M.R.C.S., Junior Assistant Medical Officer, Cornwall County Asylum, Bodmin.
1884. Workman, J., M.D., Toronto, Canada. (*Hon. Member.*)
1877. Worthington, Thos. Blair, M.A., M.B., and M.C. Trin. Coll., Dublin, Med. Supt., County Asylum, Knowle, Fareham, Hants.
1865. Wyatt, Sir William H., J.P., Chairman of Committee, County Asylum, Colney Hatch, 88, Regent's Park Road. (*Hon. Member.*)
1862. Yellowlees, David, M.D. Edin., F.F.P.S. Glasg., Physician Superintendent, Royal Asylum, Gartnavel, Glasgow.
1882. Young, W. M., M.D., Assist. Med. Officer, County Asylum, Melton, Suffolk.
1874. Younger, E. G., M.D. Bruss., M.R.C.P. Lond., M.R.C.S. Eng., Asst. Medical Officer, County Asylum, Hanwell, Middlesex.

ORDINARY MEMBERS	-	-	-	-	-	-	391
HONORARY AND CORRESPONDING MEMBERS	-	-	-	-	-	-	56
Total	-	-	-	-	-	-	447

We are indebted to Dr. Outterson Wood, of London, for the addition to the Members' names of the date at which they joined the Association. The labour involved in this useful work has been great.

Members are particularly requested to send changes of address, etc., to Dr. Fletcher Beach, the Honorary Secretary, Darenth Asylum, Dartford, and in duplicate to the Printers of the Journal, South Counties Press Limited, Lewes, Sussex.

List of those who have passed the Examination for the Certificate of Efficiency in Psychological Medicine, entitling them to append M.P.C. (Med. Psych. Certif.) to their names.

Alexander, Edward H.	Macevoy, Henry John.
Anderson, John.	Mackenzie, Henry J.
Armour, E. F.	Mackenzie, William L.
Aveline, H. T. S.	Mackenzie, John Cumming.
Barbour, William	Mackie, George
Barker, Alfred James Glanville.	Macneece, J. G.
Bird, James Brown.	Macpherson, John.
Black, Victor.	Marsh, Ernest L.
Boyd, James Paton.	Meikle, T. Gordon.
Bristowe, Hubert Carpenter.	Melville, Henry B.
Brodie, Robert C.	Monteith, James.
Bruce, John.	Moore, Edward Erskine.
Bullock, William.	* Mortimer, John Desmond Ernest.
Cameron, John.	Nairn, Robert.
Campbell, Alfred W.	Neil, James.
Calvert, William Dobree.	Nolan, Michael James.
Carruthers, Samuel W.	Oswald, Landel R.
Carter, Arthur W.	Parry, Charles P.
Chambers, James.	Patterson, Arthur Edward.
Chapman, H. C.	Pitcairn, John James.
Collie, Frank Lang.	Price, Arthur.
Cope, George Patrick.	Rainy, Harry, M.A.
Coury, John.	Rannie, James.
Corner, Harry.	Raw Nathan.
Couper, Sinclair.	Reid, Matthew A.
Cowper, John.	Renton, Robert.
Cram, John.	Rice, P. J.
Cullen, George M.	Rigden, Alan.
Davidson, William.	Ritchie, Thomas Morton.
Drummond, Russell J.	† Robertson, G. M.
Donaldson, R. L. S.	Rowand, Andrew.
Eames, Henry Martyn.	Scott, J. Walter.
Earls, James H.	Scott, William T.
Eden, Richard A. S.	Snyth, William Johnson.
Elkins, Frank A.	Stanley, John Douglas.
English, Edgar.	Staveley, William Henry Charles.
Evans, P. C.	Steel, John.
Ewan, John A.	Stewart, William Day.
Ezard, Ed. W.	Simpson, Samuel.
Fitzgerald, Gerald.	Slater, William Arnison.
Fraser, Thomas.	Smith, Percy.
Fraser, Donald Allan.	Symes, G. D.
Gaudin, Francis Neel.	Thompson, George Matthew.
Gemmell, William.	Thorpe, Arnold E.
Goodall, Edwin.	Turner, M. A.
Gray, Alex. C. E.	Walker, James.
Hassell, Gray.	Waterston, Jane Elizabeth.
Hennan, George.	Watson, George A.
Hewat, Matthew L.	Wickham, Gilbert Henry.
Howden, Robert.	Whitwell, Robert R. H.
† Hyslop, Theo. B.	Will, John Kennedy.
Ingram, Peter R.	Williams, D. J.
Jagannadham, Annie W.	Williamson, A. Maxwell.
Johnston, John M.	Wi son, John T.
Kelso, Alexander	Wilson, G. R.
Kerr, Alexander L.	Wilson, James.
Keyt, Fred.	Wood, David James.
Laing, J. H. W.	Younger, Henry J.
Leeper, Richard R.	Zimmer, Carlo Raymond.
Macdonald, John.	

* To whom the Gaskell Prize (1887) was awarded.

† To whom the Gaskell Prize (1889) was awarded.

‡ To whom the Gaskell Prize (1890) was awarded.

